PHILADELPHIA, JANUARY 22, 1887.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF CEREBRAL SYPHILIS WITH GLYCOSURIA—DEATH FROM ACUTE PHTHISIS AND DIABETIC COMA.

Delivered at the Pennsylvania Hospital, November 27 and December 4, 1886,

BY PROF. J. M. DA COSTA.

GENTLEMEN,—This patient has been in the hospital for only a short time, and occupies Bed No. 9 in the Men's Medical Ward. He is a colored man, 40 years of age, and was admitted four days ago (November 23). He states that his father died with phthisis. The patient looks older than the age given, but he is of spare frame and has never been robust. When a child, he fell and struck his head, and the next day at the breakfast-table he fainted. Ever since that time he has been subject to attacks of sick headache. Four years ago he acquired syphilis. The present illness, according to his statement, began nine weeks ago, when he became subject to vertigo and rapidly lost flesh and strength. He also noticed that he was passing a great deal of urine, rising several times in the night to empty his bladder. These symptoms steadily became worse, and within a few days of admission he developed a troublesome cough.

Upon admission he was weak and emaciated, his temperature was 99°, his pulse 92, the respirations 28 per minute. In the centre of the right lung we discovered a small area of consolidation. The urine was slightly acid in reaction, clear, amber, specific gravity 1042, and contained sugar in large quantity.

He was placed temporarily—and with a view to the lung-complication rather than for any other reason—upon small doses of iodide of potassium. Since he has been in the hospital a fever has developed. On the night after he was admitted his temperature was 102.4°. On the 25th it rose to 105°, and has continued a high fever-temperature.

He is very weak and miserable, and I will ask you to note that his heart-sounds are feeble; no murmur is distinguished.

I find in the notes that on the 25th he complained of pain in the abdominal region. His temperature this morning is down to 100°: the fever-process therefore has been modified.

With regard to treatment, I will also say that the treatment was at once changed as soon as we recognized the nature of the case,—partly on account of the fever-temperature and partly on account of the disease which underlies the whole affection. He was placed on salicylate of sodium, one drachm in twenty-four hours; and whether due to the remedy or to something else, in twenty-four hours the fever-process had decidedly ameliorated. He also passed a smaller quantity of urine: it has been reduced from six pints to four pints per diem.

Upon examination of the lung this morning, I find that there is general dulness on the right side of the chest anteriorly, and it becomes more marked as we go towards the lower part of the right lung. There is harsh respiration heard over the lower part of the same lung. As we go to the side we find the same dulness that was noted on admission. There is no pleuritic effusion. There is also diminished resonance at the upper part of the left lung. His tongue is dry, cracked, and coated. His face is thin; his mind is rather dull; pulse 120 and extremely weak; he complains of everything swimming before him. It is evident that he is in a very low condition.

Now, gentlemen, we have here a case of acute diabetes before us, with a pulmonary complication and a febrile condition, and these, roughly speaking, are what we have to explain. Add to this a certain amount of drowsiness and mental dulness, coming on late in the attack, and all this in a man who was in good health nine weeks ago, and appearing without obvious explanation except a history of remote head-injury if you choose to accept the statement. I do not myself lay much stress upon it. But how shall we explain the lung-complication? Cases of acute diabetes are very apt to have attacks of consolidation of the lung, either acute broncho-pneumonia or acute phthisis. It is not generally a difficult diagnosis between the two. Careful physical examination is out of the

question now, on account of the man's weak condition; but, even without it, if, as here, there is much emaciation, cough, and apex-consolidation of the lung, we may assume that the affection is due to tubercular disease.

Returning to the question of treatment, I placed this man upon salicylate of sodium. If there is a remedy which will do good in diabetes, it is this: a long experience with salicylate of sodium in the treatment of diabetes leads me to regard this as the best in its management. I have had now a large number of cases, both here and in other public institutions and in private practice, and I have had better results with salicylate of sodium than with any other remedy. It is better than opium, and without the bad results of opium. I give from a drachm to a drachm and a half in twenty-four hours for a certain period; then stop it for a time, and go back to it again. I have noticed also, when there is diabetes and gout at the same time,—and a diabetic diet favors the development of gout,—that the salicylate of sodium enables the patient to go on with the treatment of the diabetes without exciting the attacks of gout. Again, in a case of high temperature it is particularly advantageous. You may ask, Is it the acid or the combination with the base that is so efficient? I have tested this. I have placed patients upon salicylic acid alone, and have placed them upon other sodium salts, and also upon salicylate of sodium, and have found that, although salicylic acid does good by itself, and the sodium salts undoubtedly do good, yet diabetic patients do better upon the combination than upon either singly. But these are the results of tests extending over weeks of observation, and I have not time to refer to the cases to prove this.

For the few days that we have had the case under observation we have only had time to resort to treatment for his general condition rather than any direct specific treatment. To relieve his present low condition he should have six ounces of whiskey and twelve grains of quinine daily, while we keep up the salicylate of sodium. You know that the diet of these patients is usually restricted to green vegetables and meats; but this must not be rigidly adhered to with him. He shall have oysters, eggs, and milk, but no starchy food.

One other point in conclusion: Is his weakness and mental dulness due to the phthisis? or is it a part of the effects of diabetes,—what has been called diabetic coma, or acetonæmia, and due to retention of matters in the blood which give rise to cerebral symptoms?

As the hour has expired, I will not be able to discuss the question at present, but will leave it for our next meeting.

(*Clinical lecture continued, December 4, 1886.*)

GENTLEMEN,—This morning I wish to direct your attention first to the specimens obtained from the autopsy of the case of diabetes which was before you at our last clinic in almost a comatose condition. He died on the same day. I confess that I thought that that would be the result, because, as I told you then, he had had a continued high temperature, and there were such evident signs of extreme exhaustion that we had to abandon all treatment except stimulants and measures directed towards supporting his strength. You remember that there was decided dulness on percussion at the base and at the apex of the right lung, and that there was also moderate dulness over the upper lobe of the left lung. I remarked that it was most likely of a tubercular character; and this has proved to be the case. We have here the specimens, and you can see how far the signs observed during life correspond with what we find after death. First, look at the kidneys: they are firm, swollen, not much enlarged; the cortical substance is pale, striated, and opaque. The capsule is easily removed, leaving a smooth surface. Both kidneys are alike, except that in the interior of the right a small, hard nodule is noticed, which looks like a tubercle: it will be removed for microscopic examination. With this exception, there is nothing in the kidneys which can be said to be at all out of the way. The spleen is very small and firm, weighing only two ounces; the pancreas is also small, its substance is quite pale, and it appears shrunken and atrophied; the liver weighs only two pounds ten ounces. The surface of its section smells strongly of acetone. The gall-bladder is shrunken, and contains a small quantity of pale bile. Coming to the lungs, we observe that the upper part of the left lung is consolidated, and it contains upon its cut surfaces numerous

shot-like bodies harder than the surrounding tissue; the right lung presents a similar appearance at the point over which we detected dulness. No doubt can exist as to the presence of these tubercular formations in the lung. At the apex of the left lung there is a cavity with thick walls, and at numerous other points in both lungs are areas of softening filled with fluid; no tubercle-bacilli were detected in these fluids. The aorta presents marked atheroma, with slight dilatation; the heart shows a moderate degree of hypertrophy of the left ventricle, and contains a very firm fibrinous clot; the valves are normal, except slight atheroma of those on the left side. It weighs eight ounces.

But what is more interesting is the condition of the brain. You will remember that when he was before you he was very dull and stupid; there was no improvement after you left, and he died comatose a few hours later. Let us see if there is any explanation for those symptoms. I will read the preliminary report of the pathologist, Dr. Longstreth, who intends making a careful microscopic study after the brain has been properly hardened. "On removing the skull-cap a considerable amount of serous fluid escaped from beneath the dura mater. Upon the convexity of the cerebrum there is decided opacity of the pia mater; some of the cerebral convolutions are shrunken, and in the interior part of the longitudinal fissure quite firm, old adhesions exist between the two hemispheres. The lateral ventricles contain a small amount of serous effusion; there are small transparent cysts in both choroid plexuses; the third ventricle also contains some clear fluid. The substance of the cerebrum is very firm in most parts: on section of the basal ganglia they are found to be softened in some of their layers. The cerebellum is soft throughout, except the corpus dentatum and the central white substance; the crus cerebri of the right side contains a dark-colored elliptical area which looks like an old spot of hemorrhage or the remains of a gummatous growth; below this point the crus is softened. The pons Varolii is also softened throughout, but especially on the right side, which is shrunken. The substance of the medulla oblongata is also softened—including the tissue forming the floor of the fourth ventricle—as far down as the beginning of the spinal cord. The softening here is also more marked on the right side, but the difference between the two sides is less decided than in the pons."

Now, what did this man die of? Exhaustion, clearly, with coma. There is no doubt in my mind that this patient had acetone in the urine and in his blood, as we find it here in the liver. In other words, there was acetonous formation going on in various parts of the system. The urine had a strong smell of acetone, and when examined during life gave the color-reaction with ferric chloride. The odor is one you cannot forget when once you have learned to recognize it, though it is difficult to describe. Some have thought it like the odor of chloroform, others like that of bitter almonds, with a somewhat ethereal odor at the same time.

Now, gentlemen, with the results before us, we may inquire how they correspond with the symptoms observed during life. In the first place, how do we explain the condition of acetonæmia? It simply means that there is acetone in the blood; and it has been assumed that diabetic sugar undergoes transformation into acetone and poisons the nervous system. That this substance existed both in the urine and in the blood is evident. Yet are we warranted in attaching to acetone the same importance as we do to urea in Bright's disease? Is the coma due to the presence of acetone in the blood, just as we have excess of urea in the blood in uræmia? I think not. We cannot always connect the cerebral symptoms of diabetes with the presence in the blood of acetone or any kindred substance; and the reason I say this is that I have followed up the cases, of which I have records of a number, and have found that we may have this peculiar cerebral disturbance without acetone in the urine, and we may have a decided amount of acetonuria without the occurrence of coma. I believe that the inference is warranted that there is no necessary connection between the two conditions. The invariable cause of the nervous symptoms of diabetes, if there be one cause, is unknown.

When the patient was before you I did not go into the cause of these symptoms, as we had not the time, but I referred to a blow upon the head received in early childhood. As he had been well for many years afterwards, I advised you not to attach much importance to this. Have

we, then, a more direct explanation of the cerebral disease? Here we find softening of the crus cerebri, of the pons, and of the floor of the fourth ventricle,—in other words, of those parts of the brain which when diseased are known to be associated with diabetes mellitus, and in the neighborhood where, in animals, puncture will give rise to glycosuria.

I believe that in the present case these lesions were due to syphilis and had no connection with the old head-injury. They are recent, there is decided atheroma of the arteries, and diffuse lesions in the meninges, besides the softening in the crus and pons. Microscopic examination shows the deposits to be syphilitic, and some are decidedly gummatous in character. I regret that the history of this case is so defective, but we have learned from the friends of the patient that he had not been in usual health for nearly a year; he often spoke of vertigo, and complained of rheumatic muscular pains, which were probably syphilitic. He did not, however, particularly complain of headache, although he had been more or less subject to headache all his life. We could not find any evidence that there had been any increase in his headache recently, nor is there a history of any disturbance of special sense. He had lost flesh rapidly of late, and this was associated with increase in cough. Although during life the diagnosis of cerebral syphilis was a pretty vague one, it was fully confirmed by the autopsy.

Another question which is of considerable interest here is, Are the lesions in the lungs tubercular or syphilitic? This will bear careful study. An examination of the lungs failed to show the presence of the bacilli of tubercle, yet the other features were so characteristic, so like ordinary tubercular lesions, that I will pronounce the case one of acute phthisis complicating diabetes terminating in diabetic coma. The latency of the symptoms may have been due to the slow progress of the syphilitic deposit, but the specimens before you show it to be undoubtedly a case of cerebral syphilis.

ANTIPYRIN FOR HEADACHE. — Various kinds of headache were promptly relieved at their onset by fifteen-grain doses of antipyrin, in the hands of Dr. John Blake White, of New York.

ORIGINAL COMMUNICATIONS.

A REPORT ON RECENT PROGRESS IN NERVOUS AND MENTAL DISEASES.

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MULTIPLE NEURITIS.

DR. W. R. GOWERS, in his recent work ("A Manual of Diseases of the Nervous System"), gives a very clear description of this disease, which is now attracting so much attention.

He thinks that the "discovery" of multiple neuritis is one of the most important steps in the recent advance of neurology. The morbid change may be interstitial (between the fibres), or parenchymatous (degenerative change of the fibre itself), or both. He differentiates five forms of the disease. (1) Diphtheritic neuritis: a parenchymatous degeneration of the nerves, associated, however, with disease of other parts. (2) Tabetic neuritis: the slow chronic changes in nerve-trunks which occur in locomotor ataxia, and which may possibly not be inflammatory. (3) Leprous neuritis: the slow interstitial overgrowth of connective tissue which occurs in anæsthetic leprosy. (4) Endemic neuritis, as in the Japanese disease called kakké (and the more familiar beri-beri?). (5) Under this head he places the "other forms of multiple neuritis," which, indeed, constitute the disease to which the name is usually restricted. Gowers finds the disease most common in females, which is unexpected when he states that by far the most common cause of it is chronic alcoholism. In fact, he uses the terms "alcoholic paralysis" and "multiple neuritis" as almost identical." Among other causes, however, which he admits to be sometimes operative are cold, fatigue, rheumatism, phthisis, septicæmia, and exhausting diseases.

The pathology may consist either in parenchymatous or interstitial changes in the nerve-trunks, but in severe cases probably in both. He insists that the fibres are always damaged; but in some cases the connective tissue presents little change. As the trunks are traced upward, the evidence of inflammatory changes becomes slighter, and in all forms the anterior roots are usually normal. The nerves in

the limbs alone suffer in the majority of cases, and the affection is bilateral. The nerves supplying the extensor muscles of the hand and foot are especially liable to attack. Very rarely the phrenic, pneumogastric, facial, and hypoglossal have been inflamed, the other cranial nerves escaping. The muscles usually degenerate, as in simple forms of neuritis. The cord is usually normal. The symptoms are the same as follow inflammation of a single nerve, differing only in their wide range; they are especially motor palsy and sensory irritation. The motor palsy, as said above, is apt to be most pronounced in the musculo-spiral and anterior tibial nerves. [It is rather unfortunate that Gowers insists upon saying that the extensors *flex* the foot. The anterior tibial nerve supplies *extensor* muscles, which, by perfect analogy with the extensors in the arm, *extend* the foot. Hence in the paralysis resulting from multiple neuritis we have both wrist-drop and foot-drop. This solecism occurs through the whole chapter and book.] The symptoms are apt to set in acutely, and to be accompanied by rigors and fever. The sensory symptoms come first as vague "pins and needles sensations" in fingers and toes, preceded perhaps by rheumatoid pains. These pains increase until finally the nerve-trunks become tender on pressure, and superficial nerves, as the ulnar, may be felt to be distinctly swollen. The muscles also become very sensitive to pressure. Motor palsy supervenes, and resembles in the arms lead palsy, with the important distinction that the supinator longus muscle is apt to be involved, as it is not in plumbism. In severe cases the flexors of the wrist and ankle (hand and foot) also become involved, as do also the muscles moving the elbow-, knee-, shoulder-, and hip-joints. Electro-diagnosis is important. The nerve-trunks lose their electrical excitability [probably more completely than in some forms of anterior poliomyelitis], and the muscles put on the reactions of degeneration. Gowers calls attention to a distinct incoordination of movement, which it is important to distinguish from locomotor ataxia. The sensory phenomena are, briefly, hyperæsthesia of the extremities, especially of the palms and soles; anæsthesia along the radial side of the forearms and outer side of the leg in particular, sometimes associated with pain (*anæsthesia dolorosa?*). Reflex action is *always* lost. Trophic changes and œdema have been observed. The duration of the disease varies, but at best it is apt to extend over several months. In very severe cases death has occurred from failure of the muscles of respiration, especially the diaphragm. An important complication is mental impairment, often with delusions, particularly in the alcoholic cases.

The author does not make any novel recommendations by way of treatment. He relies upon rest, hot fomentations, counter-irritation, and the galvanic current. The article is chiefly valuable for its clear-cut, lucid description of the disease, in the author's well-known style; which description is especially welcome now, when so many diverse affections are being hastily grouped under this head in the modern eagerness for clinical novelties.

INFANTILE CEREBRAL PARALYSIS.

Dr. R. Norris Wolfenden, in the *Practitioner* for September, 1886, describes four cases of this affection. The disease has also been called spastic cerebral hemiplegia, and, again, *poliencephalitis acuta*. These names, among them, manage to describe something of the disease. The last, as indicating the pathology and being analogous to *poliomyelitis*, is on some accounts the best, were it not too technical and pedantic. One of these cases was briefly as follows. A boy of ten months was attacked with a series of convulsions, followed by paralysis of the left arm and leg. For six months the leg and arm were spastic; then they relaxed, leaving permanent weakness. Epileptiform attacks continue at intervals of about twice a week. Intelligence had been much impaired, so that at eight years he could not be taught to read. Weakness of the arm and leg continued, and the fingers were subject to slight athetotic movements. The tendon-reflexes of this side were exaggerated. There were no reactions of degeneration.

The disease is distinguished from *spinal* paralysis by the affections of the intellect, speech, special senses (sometimes), and the absence of impaired sensibility. In the spinal form also there is atrophy and coldness, with progressive reactions of degeneration, while the spastic condition is not an early and characteristic sign. Club-foot deformities are more constant and

persistent in the latter. The cerebral form may be said to occur more as a hemiplegic and epileptic *type*. The disease has followed dentition and the eruptive fevers, but in many cases the cause cannot be determined. It is an affection of early infancy. The pathology is somewhat obscure; but the indications are that the motor cortex of the brain is the seat of a circumscribed inflammatory process or some other form of degeneration.

[We no doubt have in these accidents the cause sometimes of acquired idiocy. The resemblance of the cases of Dr. Wolfenden to the *focal* epilepsy of Hughlings-Jackson seems to be marked, although the writer does not dwell upon it. The rapid and permanent injury to the brain is what we would expect in very young children. It seems strange that the descending degeneration along the motor tract of the spinal cord, as described by Charcot in adults, with continued contractions in the affected limbs, is not more noticeable in these reported cases. Exaggerated reflexes are part of this symptom-group. These cases are to be distinguished from that other class of imbeciles which depends upon a congenital abnormality or arrest of development. These latter cases usually show some tendency in the fissures and convolutions of the brain to a reversion to a lower type of cerebrum. Dr. Francis Dercum exhibited a series of such brains at the last meeting of the Philadelphia Neurological Society, all taken from epileptic dements, and explained a theory for the epilepsy based upon the loss in such brains of their static equilibrium because of unequal development of cortical areas.]

MUSCULAR ATROPHY IN HYSTERICAL PARALYSIS.

Dr. J. Babinski has a lengthy article on this subject, commencing in the July number of the *Archives de Neurologie*, in which the writer states that his treatise is designed to show that trophic disorders, especially muscular atrophy, can depend on hysteria and can be observed in hysterical paralysis. He says that observations at the Salpêtrière under M. Charcot have established this point. He gives cases in great detail, to only one of which we can refer at present. This was a young man of 21, of marked hysterical characteristics, who was suddenly taken with a left brachial monoplegia, with complete anæsthesia. He was unconscious for many hours. For more than two months the paralysis persisted, with alternate flaccidity and contractions, and was accompanied by a quite pronounced amyotrophy. Other symptoms were a slight paresis of the left leg; various hysterical attacks caused by pressure in certain regions; hemianæsthesia; transitory hysterical mutism; occasional retention of urine. The monoplegia disappeared under massage, with "flagellation" in the right temporo-parietal region. The amyotrophy disappeared upon the return of the movements. Babinski makes the differential diagnosis between this affection and an organic lesion of the motor cortex in the arm-centre, and slightly in the leg-centre, which the case certainly strongly resembles. The resemblance is further sustained by the contracture of the affected arm, as well as its wasting, both of which might have been caused by a descending degeneration along the motor paths from such a lesion in the cortex, as has been shown by Charcot and others. He argues that the alternating character of the rigidity and flaccidity is against the view of a secondary descending degeneration, as is also the early appearance of the contracture. The convulsive attacks were proved to be hysterical by the *globus hystericus*, by the fact that they could be produced by pressure on certain hysterogenic zones, by opisthotonos, and by the sudden return to consciousness. Again, the abolition of sensation is much greater in this case than would occur in a cortical organic lesion. The affected muscles did not show any fibrillary contractions, and the only electrical change noted was a diminished contractility without modal change or the reactions of degeneration. The muscles manifestly affected were the deltoid, great pectoral, shoulder muscles, biceps, and triceps. By actual measurement the paralyzed arm was about three centimetres less than its fellow.

[Wasting of muscles, with diminished electro-contractility, has been noted before in hysterical affections and attributed to disuse merely; but the interest which attaches to M. Babinski's case is that it occurred very quickly after the paralysis, so as to suggest almost an active process, and resembled, because of its marked character, the amyotrophy of an organic lesion.]

CAPILLARY EMBOLISM AND CHOREA.

Dr. Angel Money publishes in the *British*

Medical Journal for July 17, 1886, the results of his experimental studies of chorea. His experiments were made upon monkeys by injecting preparations of starch into the carotid arteries. The principal result obtained was hemiplegia, and not chorea. Dr. Money's conclusions are as follows, and from them it will be seen that he is by no means one-ideaed about either the nature or the seat of the lesion:

1. Human chorea is generally and mainly of cerebral origin, though a few cases may be of purely spinal source.

2. The commonest lesion causing chorea is a "rheumatic" affection of the circumvascular connective tissues of the motor apparatus of the brain and cord.

3. Embolism may be a cause of chorea in rare instances.

4. Chorea may be set up by "fright," when the lesion is probably a molecular disturbance of the cerebro-spinal motor apparatus.

THE CONNECTION BETWEEN EMPYEMA AND HEMIPLEGIA.

The details of a case are given in abstract in the *Practitioner* from M. Barbez, who reports it in the *Revue de Mèdecine* for June, 1886, in which five weeks after the evacuation of a highly-offensive empyema the patient became suddenly paralyzed in the right arm, with aphasia, and continued for more than two months in this condition, with mild delirium. There were some spasms of the affected arm.

Especial attention is attracted to the case by the explanation which is given of the connection between the two conditions. M. Luys considered it a case of limited left lateral meningitis. But M. Barbez classes it among so-called *reflex* hemiplegias, cases of which have been reported by several writers. The explanations seem very far-fetched to us. As the patient had a good ground-work for pyæmia, we would rather suppose that his brain-trouble was of septic origin, probably embolic.

CASTRATION IN MENTAL AND NERVOUS DISEASES.

In the *American Journal of the Medical Sciences* for October, 1886, a "symposium" is given under the above heading, contributed by Sir Spencer Wells, Dr. A. Hegar, and Dr. R. Battey. It is the most important series of opinions on this subject, as affecting the neurologist, which has appeared. The student of mental and nervous diseases had regarded as exploded the old theory that the womb, or its appendages, was the seat in any sense of the grave neuroses and psychoses. His new faith, however, was threatened, and perhaps a little shaken, by the zeal of the gynæcologists, who began to report that they cured hysteria, and even insanity, by spaying women. The authoritative opinions now expressed in this "symposium" by three of the most eminent specialists will give the neurologist an opportunity to form anew his own judgment on the subject; and we doubt if he materially recasts it. Our limited space permits us to do little more than mention the conclusions of the writers.

The paper of Wells is the broadest, most critical and entertaining, of the three. "The oöphorectomists of civilization," he tells us, "touch hands with the aboriginal spayers of New Zealand." We are not concerned, of course, with the ablation of normal ovaries in cases of uterine fibroids with uncontrollable hemorrhages, nor in malformations of the genital organs and obstructions of the vagina,—in some of which cases this eminent surgeon cautiously endorses the operation, — nor hardly in uncontrollable neuralgia, if it be *really proved* to be ovarian (in which case one enthusiast would pull out the gland as he would a bad tooth); but for pure nervous and mental diseases we put great confidence in the following conclusions of Sir Spencer Wells: "That in nearly all cases of nervous excitement and madness it is inadmissible; that in nymphomania and mental diseases it is, to say the least, unjustifiable."

In the papers of Hegar and Battey, who were original champions of the operation, the reader will be apt to expect more of the logic of the special pleader; but, while he does find this, he will be constrained to admit that the papers are in a sense conservative, and, by implication, not a little condemnatory of many who have undertaken this grave operation. The fault with Hegar's paper, for the practical neurological mind, is its abstruseness. He works out his principles with a minuteness and prolixity which are quite characteristic, but leaves the reader in doubt as to who will make these nice distinctions and apply these principles with precision. He does not give his conclusions in abstract, so as to be readily quoted, but the trend of the

reasoning is that, if a distinct causal relation can be established between the ovaries and a mental or nervous disease, it is reasonable and justifiable to cut them out. This as a broad principle might be difficult to combat, but it leaves the operator in each individual case as the sole guarantee that such a relationship *did* exist,—a diagnostic pre-eminence which all neurologists will certainly not yield to all who do this operation.

Dr. Battey begins his paper with a remarkable plea (as lawyers say) of confession and avoidance. He says he was mistaken in his early cases when he called the operation "*normal* ovariotomy:" that the ovaries and tubes removed have really been diseased. The diseases are small cysts and "fibrous degeneration" of the stroma. This seems as though meant to give the operation more plausibility; but the force of it is weakened by a quotation from Emmet, in this very article, who says that in hundreds of post-mortems he has learned "that what seemed to be a perfectly healthy ovary was a condition seldom found after death in any woman over twenty-five years of age." Dr. Battey castrates for oöphoro-mania, oöphoro-epilepsy, and oöphoralgia. The majority of alienists will probably deny point-blank the very existence of this first disease. It is doubtless meant to specify the severer forms of hysteria, just as the second class signifies the convulsions of that mystic disease. The fact that *all* the pseudo-epileptics (nine in all) are cured suggests strongly the effect of mental impression; while the fact that only one of his seven cases of mania is cured suggests equally that he has operated upon some genuine cases of maniacal insanity.

The following is Battey's table, all the cases having stood at least two years:

	Cured.	Improved.	Not Improved.	Total.
Oöphoro-mania.....	1	4	2	7
Oöphoro-epilepsy.....	9	0	0	9
Oöphoralgia.....	13	3	4	20
Total.....	23	7	6	36

It will be seen that ovarian neuralgia, the least serious disease of the list, gives the second-best results. The article closes with quotations from many well-known operators in America,—some of them very general, a few hopeful in their limited experience, all cautious, and one—Dr. Emmet, like Sir Spencer Wells—positively discouraging.

A more hopeful field for the surgeon in brain-disorders is mapped out in the following article.

BRAIN-SURGERY.

Mr. Victor Horsley read an elaborate paper recently on the surgery of the cortex before the British Medical Association, which has been published in the *British Medical Journal* for October 9, 1886. He treats especially of the surgical details necessary to the immediate operation, of which it is sufficient to say that strict antisepsis is inculcated and the most exact directions given about the incision, hemorrhage, hernia cerebri, and subsequent treatment. The student of brain-diseases will be especially interested in the cases of Horsley, their successful diagnosis, and the light which they throw upon the functional topography of the cortex.

Case I. was a young man, aged 22, with traumatic epilepsy dating back fifteen years. He had as many as *three thousand* fits a fortnight. He had a scar with absence of bone directly over the centre of the upper third of the ascending frontal convolution. His fit corresponded exactly to such as are produced from a focus of discharge in this locality,—*i.e.*, the parts affected were in the order of lower limb, upper limb, face and neck of the opposite side, the movement being first extension, then confusion, then flexion. A mass of fibrous tissue was removed beneath the scar. Temporary paralysis of the affected arm, with some loss of *tactile sensibility* and muscular sense, followed, but gradually disappeared. Up to the time of the report the patient had had no fits.

Case II. is a remarkable instance of successful diagnosis. An irritative lesion (which proved to be a tumor) was foretold in the ascending frontal and parietal convolutions, at the junction of their lower and middle thirds. This location was suggested by the spasmodic opposition of the thumb and forefinger which ushered in each fit. The tumor was successfully removed. It was followed by *temporary* paralysis of the affected members, also some *hemianæsthesia*. A complete cessation of fits was reported to date.

Case III. was an inveterate epileptic, having fits in batches of three or four every three weeks. The condition dated

back to an injury probably nineteen years before. This man had hemianæsthesia. The diagnosis was an irritative lesion in the posterior third of the superior frontal convolution. Depressed bone and scar-tissue were found, as predicted, and removed. The following are Horsley's deductions:

1. Temporary paralysis of motion and muscular sense may follow ligature of the vessels supplying that part of the motor area in which the lost movements are represented.

2. Temporary paralysis of sensation and movement of the so-called hysterical or functional type may follow operations upon the motor area in man.

3. These cases suggest the possibility of the muscular sense being represented in the excito-motor area.

It is interesting to note that the hemianæsthesia which existed in Case III. was dispelled by a strong faradic current to the region of the scar, but that the fits were not affected by it.

It is impossible to do perfect justice in an abstract to this very important and original paper of Mr. Horsley upon the gross physiology, pathology, and surgery of the brain. His cases supplement that of Bennet and Godlee in London and the successful one of Mills and White in Philadelphia.

TRANCE-CASES IN INEBRIETY.

Under this head in the *Journal of Nervous and Mental Diseases*, September–October, 1886, Dr. T. D. Crothers, of Hartford, Connecticut, describes spells of sudden loss of consciousness in inebriates somewhat similar to the "blanks" of epilepsy. They vary as in epilepsy, and may be partial or complete. They are sometimes of long duration (three hours). "Thus, an inebriate suddenly changes in conduct and language without any cause or reason, and without the usual symptoms of intoxication; or he follows an accustomed line of action in such an automatic and mechanical way as to excite attention and yet not be intoxicated. Afterwards he claims not to have remembered these periods, and his conduct and language sustain his statement."

The author of the paper thinks that great importance attaches to these trance-like spells as affecting the question of responsibility. He gives a number of interesting cases in support of his belief in this condition. "Prominent crimes and acts committed under strange, unusual circumstances by inebriates may furnish good evidence of these trance-states." Absence of motive becomes an important consideration in connection with any crime committed in this state. In the trance (which is to be distinguished from the excitement or stupor of intoxication) the individual *appears* to know exactly what he is doing, but afterwards has no memory of it whatever. These *blanks* usually occur during prolonged drinking-bouts, in which the man keeps himself constantly *full* without becoming overwhelmed with his liquor. As illustrations, "a hotel-clerk will, after periods of excess of drink, wake up in a Turkish bath, and have no idea how he came there. A farmer has found himself working on the farm, and the last event he could recall would be at a distant bar-room." These trances may occur at the beginning or during or after the alcoholic poisoning. A merchant "loses all recollection of what takes place; has no idea but that he has been asleep; and cannot realize that some days have passed in which he has been about with apparent sanity and judgment."

Dr. Crothers has a poor opinion of the memory of a confirmed inebriate, and thinks he is a most incompetent witness of any facts concerning himself or surroundings. In a recent murder trial, the prisoner, an inebriate who committed the crime while in one of these trance-states, was told at the police-station by an officer some details of the act, which he afterwards recited as events he could remember. On this he was convicted. It was ascertained afterwards that these details were false and unsupported by the facts. They were the views of the officer, and the prisoner did not recognize their origin or inconsistency. Another inebriate confused his own confession with that of a fellow-burglar confined in the same cell. This *impressibility* by the immediate surroundings, with automatic response to external impressions, and loss of memory appear to be the distinctive features of this interesting state. The author expresses his belief that responsibility in these cases can be determined only by careful study of each case, and not by any preconceived theory of responsibility in disease.

[The law is slow to allow a man to plead his own minor crimes in defence of his major ones: hence drunkenness has not been considered an excuse for murder. This may or may not be philosophical and humane; but it has been supported by the general sense of mankind. The usual exceptions to this rule seem to be in cases of chronic alcoholism, wherein the man may be said to have established a permanent psychosis, such as the drunkard's delusion of marital infidelity. Dr. Crothers's instances of *trance* in chronic inebriety would probably come under this head of established brain-impairment. The condition, if well determined, would certainly raise an interesting question of responsibility, which it might be easier for an alienist to settle to his own satisfaction than to prove to a judge and jury. Ray reports a very interesting case of this kind.]

THE CLASSIFICATION OF MENTAL DISEASES.

On the 8th of September past, a conference representing various distinguished scientific bodies of the United States and Canada, and eminent alienists and publicists, was held at Saratoga, New York, for the purpose of co-operating with an International Committee appointed at Antwerp last year under the auspices of the Belgian Society of Mental Medicine. The object was to recommend to this International Committee a basis for classification of mental diseases, in the hope of securing a uniform basis in all countries of the civilized world. The following plan of classification was adopted:

1. Mania: acute, chronic, recurrent, puerperal.
2. Melancholia: acute, chronic, recurrent, puerperal.
3. Primary delusional insanity (monomania).
4. Dementia: primary, secondary, senile, organic (tumors, hemorrhages, etc.).
5. General paralysis of the insane.
6. Epilepsy.
7. Toxic insanity (alcoholism, morphinism, etc.).
8. Congenital mental deficiency (idiocy, imbecility, cretinism).

[It will be seen that this classification is remarkably free from the elaborate differentiations which are now adopted by some writers. It looks like a reversion to the simplicity of a former and, it was supposed, more ignorant generation. The truth is that while the clinical study of insanity has advanced and been very prolific of a useful and instructive literature, our knowledge of the *essential* functions and pathology of the cerebral masses is not greatly more advanced than it was with the fathers; and without more of such intimate knowledge (unbiassed by speculation and opinion) the very foundation for a perfectly acceptable classification does not exist.]

FACIAL SPASM AND TIC-DOULOUREUX FOR WHICH NEURECTOMY AND NEURO-TENSION WERE EMPLOYED.

Read at the Philadelphia Neurological Society, December 27, 1886,

BY GUY HINSDALE, M.D.

I HAVE the pleasure of asking your attention to the records of two cases of persistent trifacial neuralgia and also a case of painless facial spasm. The two former were under the care of Dr. S. Weir Mitchell at the Infirmary for Nervous Diseases, and the last under the care of Dr. W. Sinkler, by whose permission they are brought before this Society.

The cases are of interest from the fact that the first was treated by medicines pushed to an extreme limit; the second, failing to improve under medicines, was treated by exsection of the infraorbital nerve; while the last was treated by stretching the facial nerve.

The cases are not reported because of any supposed rarity, or because they are in any way particularly remarkable; but merely to show what is the practice of the hospital, and to invite an interchange of views as to the relative merits of the treatments adopted.

Mrs. H., suffering with neuralgia of the right side of the face, entered the Infirmary for Nervous Diseases November 9, 1885. She is 62 years old, was born in New Jersey, and has always lived there. She considers her home dry and healthy and free from malaria. Her father died with phthisis. The patient herself has never had malaria or chills and fever, but had an attack of pleurisy fifteen years ago, associated with a severe cough. This has been her only severe illness. She has been married forty-two years, and has had fourteen children, of whom two only are living. Eighteen years ago she experienced a severe shock in the loss of six children from diphtheria within a period of four weeks: she had previously lost others in their infancy.

Twenty years ago the patient began to have twinges of pain in the lower jaw. Four or five years ago she suffered from attacks of neuralgia of the right side of the face two or three times a year: these attacks lasted from one to three months. In 1884 she had four or five attacks, one of which lasted two months; though quite weak, she was not confined to her bed at any time. Fever sometimes accompanied the attacks, without any chill, but with a cold sweat when the pain was very severe.

A year or two ago the pain occurred at any time during the day, but passed away at evening, upon retiring and remaining quiet. In April, 1885, the pain began to be worse at night, but it cannot be said that any special hour was observed. Cold air, eating, or drinking very hot drinks, motion in bed, bad news, mental trouble, aggravated the pain. Rest, peppermint-essence dropped on the tongue, sweating the face with hot bricks dampened with whiskey and wrapped in cloth, did for a time relieve the pain.

The treatment adopted consisted of rest in bed, good feeding, and the use of an ascending galvanic current. This was applied to the right side of the tip of the tongue and to the right side of the lower jaw for fifteen minutes, morning and evening. This was the chief locality of pain. Cod-liver oil, ʒiv, and tinct. aconiti rad. were given after meals. The aconite was gradually increased in quantity until, on the nineteenth day, she was taking seventeen drops four times a day. Elixir of iron, quinine, and strychnia, one teaspoonful thrice daily, was then added. The early doses of aconite, of two and three drops each, produced some tingling of the fingers and tongue, with numbness of the right arm and hand; the larger doses did not produce any more pronounced symptoms. The pulse varied in frequency from 67 to 82 per minute. Hydrochlorate of cocaine in four-per-cent. solution was applied two or three times a day to the painful spot on the right side of the extremity of the tongue; this gave relief for about twenty or thirty minutes. Failing to control the pain notwithstanding this persistent use of aconite, on December 1 fluid extract of gelsemium was used; four drops were given thrice daily, and the dose gradually increased until the physiological effect was produced. Hunyadi water was given occasionally, and massage of the spine was adopted. On the following morning a blister was applied to the right temporal and zygomatic region; a cold-water dressing containing half a grain of morphine was used. The blister had caused considerable local irritation by evening, and the pain in the face and tongue was relieved; the pain, however, recurred the next day, with dull aching in the forehead and across the eyes.

Lunar caustic was applied to the right side of the tip of the tongue on December 4; the area cauterized was about half an inch square. Electricity was suspended for three days. Subsequently applications of nitric acid were made to the tongue.

Swimming of the forehead, dimness of vision, and drowsiness accompanied the increasing doses of gelsemium. The dose of gelsemium was increased for twenty days, until the patient took thirty-six drops of the fluid extract three times a day; there were then dizziness, headache, some drooping of the eyelids, but no pronounced symptoms or apparent benefit from the medication.

I have prepared a chart from the careful daily records taken by Miss Kenealy, the chief nurse of the Training School, showing for each day the treatment, the pulse, respiration and temperature, and subjective symptoms.

At the end of seven weeks the patient was discharged, although still suffering at intervals from pain in her tongue. The facial pain was very much less than when she applied for treatment. The use of nitric acid on the painful spot in the tongue was advised.

At the end of six months the patient was still suffering with neuralgia, but not so severely as at first.

Mrs. E. H. H., æt. 64. No hereditary nervous disease. She was delicate in early life, and as a child had chills and fever for three years, but never had any serious illness. Thirty years ago she began to have pain in the infraorbital, and then in the supraorbital, region, darting and of intermittent character. It was serious enough to confine her to bed. The attacks were influenced by weather and exposure. Sometimes attacks came on every few days; sometimes not once in three or four months. Exposure to draughts, to cold, or to wind would bring them on. Warmth would relieve the pain. Liniments failed; warmth always gave the most relief. Duration of attacks one to seven days, or even a month. For seventeen years she had noticed a singular sensation in the right nostril, as though pierced by a dozen needles. Pain extended to the cheek and under the eye. The patient for four years had a severe attack lasting the whole month of February. It would take an entire month to recover from its effects.

November 21, 1885, the pain was constant and more or less severe, both diurnal and nocturnal, and she was kept awake a great deal at night. Teeth had been extracted from both jaws before applying for treatment.

A general tonic treatment, consisting of massage, lactate of iron, cod-liver oil, and malt, was adopted, and galvanism was applied gently to the side of the face. Blister-

ing, morphine, quinine, arseniate of iron, and bromide of lithium were applied in succession, without relief.

Finally, the infraorbital nerve was exsected by Drs. Hunt and Morton, a small portion of the floor of the orbit being also removed. The patient suffered a good deal of pain in the same spot as before; this, however, subsided to a certain extent, and two weeks after the operation she returned to her home in Maryland. While not altogether free from neuralgic pain, she considered herself much more comfortable than before and greatly improved in general health. Nine months later she was reported to be in good health, with little or no neuralgia.

In a case of painless spasm of the face, Dr. W. W. Keen has recently operated on a patient at the request of Dr. Wharton Sinkler. The patient had twice been paralyzed. Five years ago the right eyelids began to twitch, and in six months the whole face and the platysma were incessantly in spasm, which was increased by mental or muscular effort; later this was accompanied with constant pain. In June, 1884, the right infraorbital nerve had been resected, with partial relief for only six weeks. Not long after this the twitching extended to the right side of the body and to the leg.

April 2, 1886, Dr. Keen laid bare the trunk of the nerve, using an electric current to facilitate its discovery. The nerve was then stretched; the force used was just short of enough to lift the head. Total paralysis of the face followed, with relief not only of the spasm of the face and neck, but also of that of the side and leg.

Stretching of the facial nerve for cramp had been performed by Baum and Schüssler, in 1878, Eulenberg, Godlee, Hahn, and others.

In Eulenberg's case, stretching the nerve was resorted to after a neurotomy of the supraorbital had failed; a tolerably severe paralysis resulted, lasting several weeks, but finally disappeared. In Godlee's case, twenty-eight months after the stretching the favorable result remained. In Hahn's case there were spasms over the whole right side of the face; after the operation, which did not induce any paralysis, there was only partial benefit. Two years after the operation the cramps persisted.

In 1880 Langenbeck stretched the temporo-orbital division of the left facial nerve and also a branch going to the zygomatic muscles. After twelve days the eye remained wide open, paralyzed; the angle of the mouth drooped. Two months later paresis of the left side of the face was still apparent; return of spasm. After four months the spasm was as severe as ever, and the paresis was apparent. The patient thought the paralysis the lesser evil of the two.

In a case of Godlee's in which there was painful spasm of both sides of the face, the left facial was stretched; paralysis followed. Four months later the right nerve was stretched. Several months after this the paralysis had disappeared, and the condition was as bad as before the operations.

In Putnam's two cases the results were not encouraging.

In a case of Southam's in 1881, the paralysis vanished in sixteen weeks; two and a half years later the good result was still apparent.

Dr. Zesa's summary of nineteen cases gave permanent good results in three, doubtful in two, considerable improvement in four, failure in ten. In ten cases temporary benefit followed the operation.

TRANSLATIONS.

Septicæmia of Rabbits.—At a recent meeting of the Paris Biological Society, M. G. Daremberg made the following statement concerning septicæmia in rabbits. This disease is produced by the inoculation of tuberculous matter (lungs, lymphatic ganglia) taken from dead bodies in the heat of summer, when there is slight putrefaction. Rabbits thus inoculated die after an interval of twenty-four to forty hours. Septicæmia is inoculable by means of subcutaneous, peritoneal, or intravenous injections, and also by trephining. Some hours before death the animal loses all desire for food, is in a panting condition, and is depressed; it is attacked by diarrhœa and convulsions, it cries out and drags itself painfully along between the convulsions, is paralyzed in one or more of its limbs; sputum mixed with blood issues from the nostrils and mouth. The animal is rarely struck down without exhibiting the preceding symptoms.

Necropsy reveals a sero-sanguineous infiltration in the areolar and connective tissues, round about the spot where the

inoculation was practised; ecchymoses; slight capillary hemorrhage on the surface of the intestines; areas of pulmonary apoplexy; hepatic infarctions; the spleen enlarged and black; occasionally serous or fibrinous effusions in the peritoneum and pleura; large clots dispersed about, but more especially in the sinuses of the dura mater and pia mater; occasionally slight meningeal hemorrhage, or in some cases encephalic and medullary meningitis.

These clinical and anatomo-pathological symptoms are in accordance with those described by Koch in cases of experimental septicæmia of rabbits; with those described by M. Charrin in cases of septicæmia produced through deteriorated blood in charbon; and with those by M. Pasteur in cases of disease inoculated by means of the microbe of saliva.

M. Daremberg states that the spinal marrow from his rabbits, whether fresh or dried during twenty days, causes death in rabbits at the end of twenty-four to forty hours. From the twentieth to the twenty-fifth day of desiccation the toxic properties diminish in strength, and the medulla only kills the animal after three or five days have elapsed. When the twenty-fifth day of desiccation is reached, the medulla does not generally kill the animals, but they are ill for two or three days (loss of appetite, depression). It was observed that in two cases the caudal extremity of the spinal marrow, after only eighteen days of desiccation, did not kill the animals. After ten transmissions from one rabbit to another, the medulla kills animals in five hours; at this juncture the disease becomes epidemic and kills nearly all the animals in close vicinity. A medulla dried in oxygen kills rabbits twice as rapidly as a medulla dried in the open air. Air at 55° Cent. (131° Fahr.), nitrogen, carbonic acid, and mercury vapors at 15° Cent., and at 55° Cent. (131° Fahr.), the vapor of osmic and cyanhydric acids, of pyridine, of iodine, of ethyl or amyl, of benzine, of turpentine, of sulphur, of carbon, of thymol, paraldehyde, methylated spirits, acetic ether, do not diminish the toxic properties of the medulla. Iodoform, phenol, and ammonia vapors delay the death of the animal one or two days. Vapors of chloral, chloroform, aldehyde, amylic alcohol, sulphuric ether, sulphurous acid, and sulphuric anhydride destroy all toxic influence in the medullas when they are allowed to dry in an atmosphere impregnated with these substances during four or five days. The same result is obtained by means of vapors of nitrous or of those of chlorhydric acid, which reduce the medullas to a pulp.

The blood and all the organs of animals that have died from this infectious disease contain an ovoid micrococcus, which may be cultivated in veal-broth and in gelatin. The latter is not liquefied. The micrococci are occasionally dispersed in small rows or in zoögleic clusters, rarely in twos or fours. But these conditions are not constant, and the successive cultivations in broth and gelatin present sometimes one aspect, sometimes another, and often a variety of aspects; the toxic action of this micro-organism is always the same, and is equal to the fresh medullas. These cultivations preserve their virulence at 55° Cent. (131° Fahr.). Towards the seventeenth day they become less toxic, and only cause death in four or five days, and in some cases are inert.

The second cultivations are less virulent than the first; either coagulates milk. These properties prove the analogy between this micrococcus and that described by M. Pasteur, of which the first cultivations die in fifteen days, and the successive ones gradually fall away. They differ from the properties described by M. Charrin, of which the cultivations die at 45° Cent. (113° Fahr.), and of which the second cultivations are as virulent as the first. M. Daremberg has attempted the Pasteur method of successive inoculation, but without positive results. An absolute method of protective inoculation for septicæmia has yet to be discovered.

RESIDUE OF THE FERMENTS.—MM. Gayon and Dupetit, in a communication to the Academy of Sciences, point out a new means of preventing secondary fermentation in industrial alcoholic fermentations. It is well known that such products are rarely pure. It has often been tried to prevent the development of ferments, other than that of yeast, by adding to the must certain antiseptic substances. The addition of tannin was found to prevent the development of these secondary ferments, with the exception of the mycoderma aceti. On the other hand, the salts of bismuth completely prevent the latter variety of fermentation.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 22, 1887.

EDITORIAL.

THE COSMOPOLITAN CHARACTER OF MODERN SURGERY.

THE Second French Congress of Surgery was opened with a masterly address by the President, Professor Ollier, of Lyons, in which, after felicitating his hearers upon the institution and prospects of the Congress, he urged upon them the importance of looking beyond the borders of their own country for instruction wherever it could be gained, and not resting in a self-complacent exclusiveness.

"Nothing," he says, "which occurs in the surgical world ought to be foreign to us. Patriotism does not consist in admiring one's self and closing the eyes to the advances of one's rivals; but in becoming informed in regard to these advances, in utilizing them, and in attempting to surpass them." This recommendation, however, is not so much needed now as it once was, as indeed he admits. The affected superiority to other nations which once led French scientific men to ignore them and their work is, happily, disappearing, and France now shows a creditable appreciation of what is going on elsewhere, getting and giving with the freedom which should characterize the republic of letters. Examples of this are to be seen in the adoption—as yet too imperfect—of the principles of asepsis in surgery, which have now gained a fair foothold in France; also in the promulgation abroad of such doctrines as those of Ollier himself in regard to the nature and treatment of diseases of the bones, or the more recent revival of the suprapubic operation of lithotomy in England, which is directly attributable to what Sir Henry Thompson very recently learned from Professor Guyon in Paris.

Ollier touched upon other interesting topics, such as the improvement of hospital facilities in France, the improvement in their outfit and *personnel*. In regard to the latter point he made some remarks which show that he has some very decided notions as to the proper way in which to increase the success and reputation of medical centres. The rank of surgery in any country, he says, is determined chiefly by two things: the worth of those who fill its ranks and the opportunity afforded them to accomplish what they are fitted for. In France he finds that there is at present more ability than opportunity. Capable men either have no fair chance to work, or their talents are even smothered by public institutions. At present, he says, there is a veritable plethora of talented young men for whom it is almost impossible to provide opportunities for work. One might suppose that he himself was one of these young men, so impassionedly does he plead that they shall be given the opportunity to act for themselves, to exercise their talents. He depicts their patience, then their weariness in waiting, and, finally, the diminished zeal with which their work is done when at length the coveted opportunity is secured.

This state of affairs involves a great waste of power and a serious detriment to surgery in France. It does not exist everywhere, however. Even in France there are cities in which the young surgeons are carefully and successfully fostered, and in which these have come to shed lustre upon the institutions with which they were connected. Lyons, we might say, and Ollier in Lyons, could not well be mentioned as examples by the speaker; but bright examples they are. Likewise—as the speaker did say—the large number of small universities in Germany has favored the formation of surgical centres in which many

men have attained success and celebrity at an age at which in France many others still await an opportunity to do something. Ollier would incite his countrymen to develop as much as possible their own talent, and to encourage those aspiring and talented young men who are the hope of the future in France.

This argument has a wider application than was in the speaker's mind when he made it. The hope of any country is in its young men. America is not deficient in such as are deserving of encouragement, nor, we believe, are the older men with established reputations unaware of this fact or unwilling to assist them to mount in turn to the heights which they already tread. Even now, in the field of medicine and of general and special surgery, there are a number of young men in America who owe it partly to the encouragement and assistance of those older than themselves that they have attained positions from which they may hope, if industrious and conscientious, to step in due time into the first rank. To them, and to those who would be of their number, the lesson of the hour is, not to be impatient; to those already in influential positions the appeal of Ollier may serve as a reminder that everywhere "there is that scattereth and yet increaseth, and there is that withholdeth more than is meet, and it tendeth to poverty."

In concluding his address, Professor Ollier very appropriately defined and defended a proper specialism in surgery, illustrating the advantage of the cultivation of certain special lines of practice by broad-minded and broadly-educated men by citing ophthalmology and gynæcology; to which we may add general abdominal surgery, brain-surgery, and his own admirable work in the field of diseases of the bones and joints.

In conclusion, we would join our congratulations to those of his hearers upon this excellent and suggestive address, and express our best wishes for the future of the French Congress of Surgery.

FALLACIES IN THE COPPER TESTS FOR GLYCOSURIA.

PROBABLY most physicians in testing urine to determine the presence of sugar use either Trommer's or Fehling's test, both on account of their convenience of application and of their generally supposed trustworthiness. The specific-gravity test is frequently altogether omitted, although those who have had much experience in urinalysis place a very high value upon the indications derived from the urinometer.

In a recent note in the *Boston Medical and Surgical Journal*, Dr. O. W. Sherwin states that on testing a specimen of urine with Fehling's solution the copper was reduced as with sugar. As the specific gravity of the urine was only 1015, he was induced to make further inquiry, and discovered that a small quantity of chloral hydrate had been added to the urine for preservation. He also found that the urine of persons to whom chloral had been given reacted to Fehling's solution in a similar manner to diabetic urine. The fact that the urine of persons taking chloral will reduce the copper from a test-solution has long been known. Certain other medicinal substances —as turpentine, chloroform, benzoic acid, salicylic acid, camphor, copaiba, and cubebs—will produce a similar result, if the test is made in the usual manner by heating the urine. From inquiries made recently we are forced to believe that many practitioners are unfamiliar with the above-named sources of error.

Dr. Frank Donaldson, in a paper published in the *Baltimore Underwriter* for January 5, 1887, gives the history of a man, aged 37 years, who applied for life-insurance. The personal and family history of the applicant were excellent. The urine was of a dark straw color, spe-

cific gravity 1024, acid, moderate in quantity, and free from albumen. Fehling's test showed a heavy reduction of cuprous oxide. Although there was no clinical evidence of diabetes, the application was rejected. The same fate met the gentleman when he applied to other companies. He was always turned down on the same ground by the medical examiners. A prominent medical director of an insurance company in New York told him "he had enough sugar in his urine to float a ship." These unfavorable reports induced the gentleman to place himself under Dr. Donaldson's care for treatment. For months he was "subjected to all kinds of treatment,—hygienic, dietetic, and therapeutical,"—with no change in the behavior of the urine towards the copper-solution. His health continued good, and he increased in weight and girth. Professor Tyson was called in consultation, and upon examination of the urine concluded that the reducing substance was not glucose. Professor Wormley coincided in this opinion.

Dr. Brune, of Baltimore, made an elaborate study of the urine of the same person, and found that the copper tests gave reactions similar to sugar, but that the fermentation-test and the polariscope proved the absence of glucose. Most of the gentlemen who have studied this case have come to the conclusion that the urine contains an acid heretofore unknown. The nature of this substance is now under investigation both by Dr. Brune, who is pursuing his researches at Johns Hopkins University, and by Dr. John Marshall, at the laboratory of the University of Pennsylvania, under the direction of Professor Wormley. Dr. Marshall believes the substance to be an acid not recognized heretofore.

These cases serve to point out the great caution necessary in giving an opinion based upon a defective method of examination. The low specific gravity of the urine, the small quantity passed, and the absence of all clinical evidences of diabetes, should have led to an examination of the urine with the polariscope, or to the use of the fermentation-test, before hazarding a decision.

CIRCULARS OF THE STATE BOARD OF HEALTH.—Dr. Lee, the Secretary of the State Board of Health of Pennsylvania, has issued a series of circulars containing valuable advice and information with regard to contagious and infectious diseases, and especially diphtheria, scarlatina, and typhoid fever. The circulars also contain suggestions of great practical value as to prophylaxis and the preparation and management of disinfectants.

LEADING ARTICLES.

NEURASTHENIA.

IN condensing the phrase "nervous asthenia"—first suggested by Dr. Fordyce Barker—into the single word *neurasthenia*, the late Dr. George M. Beard enriched medical nomenclature by an elementary title accurately designating the condition to which it is applied,—*i.e.*, "want of strength in the nerve."*

Neurasthenia is generally classed among the so-called "functional" affections of the nervous system. Beard, however, in his original paper upon the subject distinctly stated his conviction that there are definite structural alterations, although perhaps undetectable, in the nervous system, underlying the functional disorders which furnish the varied manifestations of neurasthenia. That this neurasthenic condition may eventuate in various grave or even fatal disorders is now becoming more generally recognized, and the views expressed by Beard nearly twenty years ago are daily obtaining more favorable consideration.

Arndt† has proposed a new theory of the ultimate or underlying cause of neurasthenia. According to his theory, neurasthenia is in all cases due to a defective nervous organization, the nervous supply

* Beard on "Neurasthenia, or Nervous Exhaustion." *Boston Medical and Surgical Journal*, April 29, 1869.
† Die Neurasthenie, Wien, 1886.

being inadequate to perform the functions demanded by the physical organism of which it is respectively a part. In some instances the disproportion between nervous and non-nervous tissue may be so slight that no disorder results until excessive demands are made upon the nervous power, or until some grave interference with general nutrition—*i.e.*, some depressing disease, injury, or other cause of malassimilation—makes the inequality more prominent. These are the cases which usually manifest themselves decidedly for the first time in advanced life in the broken-down business and professional man, bankrupt of nerve-force, of which this country has so large a proportion, and which seemed to justify Beard's designation of neurasthenia as a distinctively American disease. So long as food is well digested, the blood properly oxygenated, the products of retrograde metamorphosis removed from the system by normally-acting emunctories, and the brain allowed intervals of recuperating rest, the individual does not become neurasthenic. But when any one or more of these conditions fail of attainment, the shortcomings of the defective nervous organization become apparent after a shorter or longer interval.

If, on the other hand, the original disproportion between the nervous system and the rest of the organism is great, the evidences of neurasthenia are early manifested,—either in infancy, in childhood, at puberty, or during adolescence.

The trivial importance attached to neurasthenia by the majority of general practitioners often results in serious harm to the afflicted individuals. The diagnoses of hysteria, hypochondria, or syphilophobia, so frequently heard in our clinical amphitheatres, are responsible for much of the flippancy with which many of these heavily-burdened patients are treated. Lightly to accuse a woman of being "hysterical" or a man of being "hipped" may often be the gravest injustice, attaching, as it does, a stigma to the patient which may lead to permanent valetudinarianism or even to self-destruction. Dr. Emmet has shown, by his brilliant clinical studies upon the consequences of neglect of certain lacerations of the cervix uteri, how many cases of so-called hysteria are dependent upon a purely physical condition of the nerves involved in the laceration. In the light of present knowledge, the nervous symptoms of laceration of the cervix uteri must be considered as expressions of the lack of nerve-power.

The manifestations of neurasthenia, diverse as they are in causation, are no less frequent than bewildering in their multiformity. Cases now and then occur characterized by general indisposition, vague nerve-, muscle-, or bone-pains, loss of appetite, sleeplessness, depression of spirits, frequent attacks of sick headache, lack of the power of sustained intellectual application, and similar symptoms not referable to any special organ or apparatus. In other cases the languid or semi-paretic condition is replaced by nervous exaltation or irascibility. In fact, both conditions may characterize the same case at different times.

These cases might with propriety be called cerebro-spinal neurasthenia. They are exceedingly troublesome to manage, and in many instances terminate in insanity or structural disease of the spinal cord. The gradual change from soundness to unsoundness of cerebral and spinal functions in these cases is well described by Blandford* and Arndt.†

The most marked forms of cerebro-spinal neurasthenia result from extreme nervous exhaustion from any cause. Intense intellectual application in persons with a neurasthenic predisposition—in other words, with a primarily defective nervous organization—frequently determines an outbreak. Many of the leading writers, artists, and public men of the day belong to this class. Among the more prominent neurasthenics of the present century were Walter Savage Landor, Carlyle, Dante Gabriel Rossetti, Richard Wagner, and Victor Hugo. In this country two of the most distinguished women writers have recently suffered to an extreme degree from cerebro-spinal neurasthenia.

Many of these cases can be immediately traced to some traumatism, an especially large number being the consequence of railroad-injuries. Mr. Erichsen and Dr. Beard have both described a number of such cases in detail. In the sad case of the American poet John G. Saxe, now a confirmed victim to melancholia, the origin of the disease was a spinal concussion received in a railway-accident. The methods of studying the brain recently developed by M. Luys will doubtless en-

* "Insanity and its Treatment," Lecture III.
† Loc. cit., pp. 171-202.

large our knowledge of the more intimate nature of the processes concerned in the evolution of morbid psychic and motor manifestations resulting from traumatism.

Neurasthenia as effect, and probably in a measure also as cause, of local alterations of nutrition, is extremely frequent. The manifold reflex symptoms of disturbances in the genito-urinary system are simply manifestations of neurasthenia. Lallemand, Acton, Beard, S. W. Gross, Moreau, Howe, Hammond, Von Krafft-Ebing, Tarnowsky, Ultzmann, and, above all, Otis, have shown the very intimate connection between genito-urinary diseases in the male and nervous exhaustion. Not merely did the profound original researches of Otis point out the connection between urethral stricture and many nervous symptoms previously misunderstood, but his practical ingenuity gave to the profession a ready means of cure. Dr. Sayre has shown the etiological relations of adherent prepuce to epileptoid conditions, and has likewise indicated the methods of relief. In the writer's experience, an elongated and phimotic prepuce has not rarely seemed to be the cause of the train of symptoms comprised under the designation spermatorrhœa. At all events, the simple dorsal division of the prepuce has seldom failed to check promptly the frequent involuntary emissions and render the nervous symptoms amenable to appropriate treatment. In one marked case of pathophobia, under treatment two years ago, the symptoms seemed to be attributable to a frequently-recurring herpes preputialis. At all events, improvement in the psychic condition progressed *pari passu* with relief of the local disorder.

The female sex is probably subject to neurasthenia from sexual disorders to a still greater degree than the male. Emmet's epoch-marking investigations into the consequences of laceration of the cervix uteri show most conclusively the powerful influence of local nerve-lesions in the production of neurasthenia. Trustworthy authorities have stated that mental alienation may result from a continuance of marked neurasthenic symptoms. During a term of service in the Maryland Woman's Hospital and in many cases in private practice the writer has had opportunities to observe the rapid disappearance of the symptoms of nervous depression after appropriate local treatment.

Again, the manifold neurotic symptoms which attend attacks of chronic oöphoritis or pelvic peritonitis and cellulitis, and which not rarely eventuate in insanity, are evidences of neurasthenia depending upon local pathological conditions. A recent clinical contribution by Moritz Meyer* calls attention to the frequency with which certain neuroses are dependent upon local neuritic affections, and points out the appropriate remedy.

Mr. H. B. Hewetson† has also reported a number of cases of general neuroses due to eye-diseases. It is, of course, not pretended that all the cases of general neurotic disorder depending upon local affections are properly called neurasthenia; but the relation is much more frequent than is generally believed.

On the other hand, a neurotic or neurasthenic constitution may be responsible for the intensification, if not also for the origin, of the local disease. This is unquestionable in certain of the disorders of the genito-urinary apparatus in both sexes. Involuntary seminal emissions and functional impotence are notoriously frequent consequences of a lack of nerve-force. In women, ovarian irritability, amenorrhœa, and dysmenorrhœa can often be referred to the same source.

It looks very improbable at first sight that new-growths, especially cancer, should be rationally attributable to the influence of nervous depression. However, so acute an observer as Sir James Paget seems to incline to the view that such a relation may possibly exist. Snow‡ states that of one hundred and forty cases of mammary cancer analyzed by him, "one hundred and three gave an account of previous mental trouble, hard work, or other debilitating agency." Of one hundred and eighty-seven cases of uterine cancer, nearly one-half (ninety-one) gave a similar history. A number of detailed histories given by this author seem to bear out the claim that mental depression (neurasthenia) is a frequent cause of cancer. Arndt§ is positive that neurasthenia is an etiological forerunner of cancer, and relates three illustrative cases. Willard Parker‖ states that "there are the strongest physio-

* Berliner Klin. Wochenschrift, October 25, 1886.
† London Lancet, November 27, 1886.
‡ "Clinical Notes on Cancer," London, 1883, p. 30.
§ Die Neurasthenie, Wien, 1886, pp. 202–208.
‖ "On Cancer," New York, 1885, pp. 40–43 and 58.

logical reasons for believing that great mental depression, particularly grief, induces a predisposition to such a disease as cancer, or becomes an exciting cause under circumstances where the disease had already been acquired." In over one-fourth of Parker's cases of cancer of the breast (one hundred and six out of three hundred and ninety-seven), nervous depression or conditions directly leading to it are set down as forerunners of the disease.

Cooke* points out the fact that in women cancer occurs on an average ten years earlier than in men, coinciding in the former sex with the menopause, and in the latter with the period of greatest exhaustion of the nervous system. He remarks that "the women of fifty are very generally more worn and wasted than the men of seventy." It is between the fiftieth and sixtieth years that neurasthenia from professional overwork is most frequent. The merchant, official, or professional man is reminded that he cannot do the same amount of work at fifty that he could at thirty: in the words of a distinguished Philadelphia teacher of the last generation, "he cannot get a three-minute pace out of a four-minute horse."

Jonathan Hutchinson† says upon the same point, "We shall probably be not far from the truth if we admit senility of tissues, local or general, to be the one predisposing cause of cancer with which we are acquainted. . . . A little step further may next be taken, in the belief that everything which hastens senility, either local or general, will increase the predisposing influence, and *in this category may be placed anxiety, distress, overwork, and excesses of all kinds. It is highly probable that under such conditions a state involving increased proneness to cancer may be induced,* and, further, *that if offsprings are produced after that state has been developed, they will inherit that tendency.*"

Parker, in commenting upon the unfriendly attitude of modern microscopical pathologists towards the theory that derangements of the nervous system may determine the origin of cancer, makes the wise observation that too close attention to the revelations of the microscope may obscure our view into the conditions underlying the visible changes. The question certainly deserves more unprejudiced study than it has heretofore received.

Disorders of the digestive system are intimately related to neurasthenic conditions. Even in persons with no demonstrable inherited nerve-weakness, any great depression of the assimilative organs results in a passing neurasthenia. Gastric or intestinal catarrhs, or disorders of the liver, or an overloaded condition of the large intestine,‡ if long continued, are nearly always accompanied by neurasthenia. Where there is an inherited neurasthenic constitution, the digestive troubles are doubtless sometimes the consequence of a foregoing nervous depression. Every practitioner sees such cases almost daily; but the relations between cause and effect often remain unrecognized. The sub-diaphragmatic self-consciousness of Carlyle was doubtless of this nature. The loss of digestive power, insomnia, mental irascibility, and unmanly treatment of his wife and friends, which characterized his later life, all point to an inherited neurasthenic predisposition. Some of these characteristics were still more pronounced in Walter Savage Landor.§

The frequency of the diagnosis of "nervous dyspepsia" is an indication that a tendency to attribute to the nervous system a share in the production of painful digestion is gaining ground. However, as Dr. Clifford Allbutt clearly pointed out in the Gulstonian Lectures for 1884,‖ what is so commonly termed nervous dyspepsia is not really dyspepsia or gastric disorder at all, but a manifestation of neurasthenia, curable only by appropriate treatment directed to the nervous system. Drs. S. Weir Mitchell¶ and Richard M. Hodges** have also pointedly called attention to the customary lack of accuracy in the diagnosis of these cases, and have given many judicious hints for their management.

GEORGE H. ROHÉ.

THE NEUROLOGICAL REVIEW.—On account of the impaired health of the editor, Professor J. S. Jewell, the *Review* will suspend publication for the present. The cordial sympathy of the profession is with Dr. Jewell, and it is hoped that he may soon be restored to health and vigor.

* "On Cancer," London, 1865.
† "The Pedigree of Disease," New York, 1885, p. 74.
‡ J. S. Jewell, in *Neurological Review*, vol. i. No. 4, p. 218 *et seq.*
§ "Landor." By Sidney Colvin. New York, 1881.
‖ "The Visceral Neuroses," Philadelphia, 1884.
¶ "Fat and Blood," and "Nervous Diseases of Women."
** Boston Medical and Surgical Journal, July 10, 1884.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE report of the joint committee appointed by the Royal College of Physicians and the Royal College of Surgeons to consider the question of the desirability and practicability of obtaining power to grant degrees in medicine and surgery to persons who have passed the conjoint examinations of the two colleges has been presented and discussed by the governing bodies. The next step will probably be the presentation to the Crown of a petition for a charter. There are precedents in the history of several mediæval universities for the creation of a university with a single faculty: the University of Salerno, which only became extinct about a century ago, was for many generations the chief medical school in Europe, and it consisted of but one faculty; the University of Bologna at first had but one faculty, that of law; and even the University of Paris consisted originally of but one faculty, which was practically a theological faculty. The application for a charter will probably be opposed, overtly or covertly, by the University of London; the Association for Promoting a Teaching University for London will undoubtedly oppose, unless its guiding principle—the admission of representatives of the teachers in the medical schools to the governing body of the new university—is recognized. Whether these bodies have any legal right to oppose may be open to question; but there is no doubt that, before a charter is granted, the objections of existing bodies whose privileges might be injured by its grant are always listened to. The general opinion seems to be that the scheme of the two Royal Colleges may be modified, but that it will eventually succeed, and that a new university, to be called perhaps the University of Westminster, will come into existence within the next few years.

The police regulations directed against rabid dogs have been suspended in London, where they are supposed to have served their purpose; but various provincial towns have found it necessary to put similar rules in force. The British Hydrophobia Commission has not yet reported, but Professor Victor Horsley, the Secretary of the Commission, who has performed all the experiments, when speaking the other night to a paper read by Dr. Hime, of Bradford, at the Pathological Society, promised that he would shortly bring the result of his researches before that society. Dr. Hime's paper was founded on original researches made in Paris, and was chiefly directed to proving that the symptoms produced in rabbits after inoculation with the Pasteurian virus were constant and characteristic, and to rebutting the assertions made by Drs. Spitzka and Dolan with regard to the similarity of the symptoms to those following the intra-cranial injection of putrid or sterilized bouillon. The injection of virus is made into the arachnoid space, and the brain is not injured: one of the specimens shown by Dr. Hime on December 7 was a fresh preparation of the head of a rabbit inoculated in Pasteur's laboratory with rabid virus on December 4; when the skull-cap was removed, the brain was seen to be quite uninjured.

At the last meeting of the Royal Medical and Chirurgical Society, Mr. Savory read a paper founded on the examination of a series of specimens of ligature of the femoral artery for popliteal aneurism. His general conclusion from the study of a large number of cases and specimens was that, in the majority of cases of popliteal aneurism, it was more advisable to tie the popliteal artery than the femoral, and that the danger of rupture of the artery had been exaggerated. This is, of course, opposed to current teaching, as the fact that in none of the specimens examined was the artery found impervious throughout is opposed to current statements. The discussion went off on a side-track, for Mr. Bowlby was the only speaker who dealt with the question whether it is best to ligature low down; from the examination of many specimens he had ascertained that, as a rule, the condition of the artery immediately above the aneurism was rather better than its condition in Scarpa's triangle. The other speakers were chiefly occupied by the method of ligature, all expressing their preference for double ligature with division of the artery. Both these questions—the question of ligature near the sac and of double ligature—are examples of the extensive revisions of old *dicta* which the modern systems of antiseptic dressing have necessitated.

At the same meeting a paper by Mr. Treves was read on *hernia lateralis*, a condition to which he proposed to apply the term "Richter's hernia," a suggestion vigorously combated by Mr. Hulke. Questions of nomenclature are, no doubt, of but little importance, but since in the hernia in question a part only of the circumference of the gut is engaged and strangulated, the term hernia lateralis appears to be most appropriate, and better than the third suggested alternative, "partial enterocele." Mr. Treves described the symptoms as milder than in ordinary forms of strangulation, but Mr. Hulke had found them unusually acute: however this may be, it seems clear that, in some cases at any rate, the symptoms are not characteristic, inasmuch as Mr. Treves was able to quote examples where constipation was not complete, some even where diarrhœa was present, and had found that tympanitic distention was uncommon, and that vomiting was slighter, was rarely fæcal, and set in later than in cases of complete strangulation. Nevertheless, the mortality was high,—62.2

per cent.,—owing probably to the cases not being recognized.

The very good results obtained by the use of corrosive sublimate solutions in midwifery practice appear to be generally acknowledged. Dr. Boxall, who was resident medical officer to the Lying-In Hospital in York Road, Lambeth, during a period of transition, stated at the Obstetrical Society that the mortality decreased when permanganate solutions were replaced by carbolic acid, and that it fell still further when carbolic acid was replaced by sublimate solutions (one in two thousand); in the series the diminution amounted to thirty per cent. Dr. W. R. Dakin has collected cases which prove that even this valuable method of treatment must be used with discrimination; he reported ten cases of mercurial poisoning out of one hundred and sixty-five deliveries; one case ended in death. Dr. Matthews Duncan seems to have been so impressed by the liability to produce mercurialism by these injections that his practice is only to use the sublimate for occasional applications, and to use carbolic acid for the habitual antiseptic washings. Dr. Champneys, who was one of the physicians to the York Road Lying-In Hospital when the sublimate washings were introduced, and is strongly in favor of the routine use of such post-partum irrigations in hospitals, stated that in private practice he used them only for cases of operation; in such cases he washed out the vagina, and the uterus also if it had been entered by the hand, with corrosive sublimate (one in one thousand or two thousand). He left one of Ehrendorf's iodoform bougies in the uterus, and did not repeat the sublimate injections.

The Liverpool Medical Institution, on account "of the large and increasing number of cases of abdominal section in the Hospital for Women" in that city, appointed a committee to investigate "the grave questions of practice and ethics involved in the performance of these operations." The committee took ten months to accomplish their work, the delay being due partly to the illness of Dr. Imlach, who had performed most of the operations, and partly to a civil action brought against Dr. Imlach by one of his patients. The committee reported with regard to the operation of removal of the uterine appendages, that many of the patients operated on received distinct and probably permanent benefit; that to nearly an equal number the relief did not seem to have been of a decided or lasting character; and that some patients had been rendered worse. The committee insisted that the operation could not be judged on precisely the same grounds as other operations, for it considered that the removal of the organs characteristic of sex is and always will be viewed by the public and the profession with misgiving; it recommended that a consultation should always be held before performing the operation, and that the utmost pains should be taken to inform the patient, or in exceptional cases her relatives, of the nature and consequences of the operation. The impression generally left by the perusal of the report and Dr. Imlach's reply seems to have been that he has been wanting in judgment and in discrimination in the selection of cases, and that, on the whole, his colleagues of the Liverpool Medical Association have treated him with fairness.

Sir Andrew Clark has recently retired from the active staff of the London Hospital, where he has been senior physician for several years and a most active clinical teacher for many more. A committee has been formed to present him with a testimonial, and subscriptions are invited; it is intended to present him with his portrait, and at the same time to provide a replica to be placed in the library of the new college buildings. The response is certain to be liberal and hearty.

A committee has also been formed to present a testimonial to Dr. Edward Waters, of Chester, "in recognition of his earnest devotion through many years of self-sacrifice to the cause of internal medical reform." The Medical Act of 1886 is neither flawless nor final, still it is a step forward; it renders the threefold qualifications compulsory, and has established the right of the medical profession, as distinct from medical colleges, to be represented on the General Medical Council. In all that concerned this question Dr. Waters was the moving spirit in the counsels of the British Medical Association, and the general recognition of his public services in this matter combines with the high esteem in which he is held by those who have the advantage of knowing him personally to make the proposed testimonial generally popular.

Yet another testimonial has been proposed: at a meeting held in Dublin last week an influential committee was formed to raise a fund as a testimonial to Dr. Archibald Jacobs, of Dublin, who was an unsuccessful candidate at the recent election for direct representatives. Dr. Jacobs is the editor in Ireland of the *Medical Press and Circular*, and has worked hard in the interest of the general practitioner in Ireland, whose lot, always hard, is sometimes rendered almost intolerable by the exactions and parsimony of local boards.

Guy's Hospital is in great financial embarrassment; its revenues are chiefly derived from land, and the present agricultural depression has compelled the Governors to lower rents or to make at least temporary reductions; in all probability reductions now made, even though ostensibly temporary, will be practically permanent. A meeting was held this week in the Mansion House, under the presidency of the Lord Mayor, in order to attract public attention to the unfortunate position of the hospital. The Duke of Cam-

bridge stated that the annual income had fallen from forty-one thousand pounds to twenty-five thousand pounds, and that a third of the beds in the hospital were not in use. Cardinal Manning made a telling speech, strongly objecting to the scheme for placing the hospitals under governmental control, partly because he believed that the system worked badly in Paris,—it may be remembered that the religieuses have recently been expelled,—and partly because "he had *no* belief in mechanics, but a profound belief in the dynamic power of charity that had governed and civilized the world." The hospital asks for one hundred thousand pounds, and has already been promised seventeen thousand pounds. It is known that the income has been falling off for some years, and several small expedients for increasing the receipts have been tried; one of these is to "reserve" certain beds in the general wards for patients who could afford to pay a guinea a week; another is to charge out-patients threepence to defray part of the cost of their medicine: both expedients seem to be extremely unpopular with the profession in South London, and when Mr. Lushington, an ex-Indian official who some years ago was pitchforked into the important position of Treasurer of Guy's Hospital, mentioned this new application of the "advice-gratis-medicine-sixpence" principle at a meeting of the Metropolitan Provident Medical Association, his speech appears to have been brought to an abrupt termination by "signs of dissent," —*i.e.*, shouts of indignation. The reckless way in which persons who can well afford to pay are admitted without let or hinderance to the out-patient departments of most London and provincial hospitals is undoubtedly a crying scandal; but it is one for the committees of hospitals, rather than for the medical officers, to bring to an end.

DAWSON WILLIAMS.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held December 16, 1886, the President, A. JACOBI, M.D., in the chair.

FERMENTATION, PUTREFACTION, AND SUPPURATION.

Dr. HERMAN KNAPP, in introducing this subject, said that he was led to do so from the fact that there was a wide difference of opinion among physicians regarding the part played by bacteria in the production of disease. He had heard a distinguished professor of Berlin express the opinion that the great majority of diseases, from the modern standpoint of science, seemed to be of bacterial origin, while a short time before a professor in one of the medical colleges of New York had said that bacteriology might be important from a scientific point of view, "but practically," he asked, "what does it signify? Six diseases." This being a great contrast of opinion, Dr. Knapp asked whether it was not possible that the one overestimated and the other underestimated the importance of the subject. With a view to answering this question, he had referred to the statistics of mortality in New York and other cities for the week ending August 21, 1886, as published in the *Boston Medical and Surgical Journal*. In New York, it was stated, the death-rate from infectious diseases was thirty-three per cent.: then it was stated that the mortality from consumption was sixteen per cent., from diphtheria and croup five, and, Dr. Knapp said, as these were undoubtedly of bacterial origin, it raised the percentage to fifty-four. Of diarrhœal affections he thought at least ninety per cent. were of bacterial origin, and in the statistics quoted the percentage of deaths from diarrhœal diseases was placed at twenty in New York and as high as thirty-five in some other cities. This would raise the percentage of deaths from bacterial diseases to seventy-five. But no account had yet been taken of the deaths from pneumonia, peritonitis, endocarditis, malaria, gonorrhœa, typhoid fever, skin-diseases, and surgical affections. Reckoning these at fifteen per cent., it brought the percentage of deaths from diseases of bacterial origin up to ninety. This outcome of the figures had struck him with surprise, and, unless he had made a great mistake, they showed that the professor of Berlin was correct.

Bacteriology had shown its principal fruits in the department of surgery. Why did surgery take the lead that it did? Because of antisepsis; and antisepsis was but the application of the three terms fermentation, putrefaction, and suppuration. Dr. Knapp had repeated the experiments of Schultze, Schwam, Helmholtz, and others, demonstrating that fermentable substances from which impure air or germs had been excluded would not ferment. It had been further established that fermentation consisted in the decomposition of the carbo-hydrates by the action of the yeast-plant.

The process of putrefaction was akin to that of fermentation, only the bacteria were different, and the putrescible substance was different from the fermentable; it contained carbo-hydrates, sulphur, and nitrogen. Were the processes of putrefaction and suppuration the same? Surgeons generally used the terms so promiscuously as to lead one to suppose that they were either identical in meaning or that suppuration was a sequence of putrefaction; yet there seemed to be an important difference between them. The strong resemblance to pus observable in the changes which took place in the frog's eye a few hours

after extirpation was referred to. The surgeon asserted that if germs were kept away from a wound suppuration would not take place.

The author then stated three interrogatory propositions:

1. Does mere traumatism produce suppuration?
2. Do foreign bodies produce suppuration?
3. Do chemical agents of any nature produce suppuration?

As bearing on the first question, he said that while in Berlin he performed on rabbits all the operations which the ophthalmologist was called upon to perform on man,—on one eye with clean instruments, on the other with contaminated instruments: the wounds produced with clean instruments always healed without suppuration, those produced by contaminated instruments always suppurated. He had performed operations upon the human subject in the rudest manner, but with perfectly clean instruments, and suppuration never followed. If a simple fracture ever suppurated, it was only when there was a focus of suppuration at some other point. He therefore concluded that mere traumatism was in no way capable of producing suppuration.

Were foreign bodies of themselves capable of producing suppuration? As bearing upon this question, Dr. Knapp exhibited rabbits in one eye of which he had inserted the end of a rusty hair-pin and allowed it to remain, and into the other the end of a rusty hair-pin brought to a glow: the first eye had in every case suppurated, in the second no suppuration had taken place.

As to the third question, many of the highest authorities had asserted that chemical agents would produce suppuration. But if this apparent exception was not shown to be invalid, then the germ-theory of suppuration could not be supported. The experiments of Straus and others, and those which Dr. Knapp himself had performed, showed that chemical agents would not produce suppuration when germs were rigorously excluded. Experiments with these agents, however, were not easy; they were especially difficult with croton oil, which was extremely irritating and unmanageable. Yet even of this substance Dr. Knapp had succeeded in injecting a drop into one eye of rabbits, avoiding the entrance of germs and the formation of pus, while in the other eye, treated without precautions against the entrance of germs, suppuration developed. The best method for carrying out this experiment was that of Straus, consisting in first cauterizing the skin of the animal where the injection was to be made, and sealing the puncture by the cautery immediately on withdrawing the needle. A special hypodermic needle was recommended. While signs of irritation were present in the eye in which croton oil was injected with precaution against the entrance of germs, there was no pus and no germs; the contrary was the case when the oil was injected without such precautions. He therefore thought the proposition that no chemical agent, however irritant, would produce suppuration was pretty well established.

In conclusion, he asked, What is suppuration? He thought that, as in the case of fermentation, the cause—the microbe—entered into the definition, it should also enter into the definition of suppuration. It was said that fermentation consisted in the splitting up of the hydro-carbonates by the aid of yeast-cells; that putrefaction was the splitting up of nitrogenous substances by the agency of microbes; and it had been shown that suppuration was likewise the splitting up of nitrogenous substances by the agency of bacteria. The substances acted upon and the agencies were the same in the process of putrefaction and that of suppuration, but we speak of the process as putrefactive when the substance is a dead material, and as suppurative when it concerns living material. So we might say that putrefaction is the splitting up of dead nitrogenous substance through the agency of bacteria, whilst suppuration is the splitting up of living nitrogenous substance through the agency of the same or similar bacteria. In this way the parallelism of the three processes—fermentation, putrefaction, and suppuration—was established.

Dr. Knapp showed different kinds of micrococci.

Dr. CHARLES HEITZMAN had examined the eye of one of the rabbits in which Dr. Knapp had injected croton oil with antiseptic precautions, and, while inflammatory changes were present, yet there was not a single microbe, and he left Dr. Knapp almost a convert to his views. That suppuration and inflammation were not identical terms had been recognized by surgeons for many years. But there were conditions which it was difficult to explain on the supposition of the presence of bacteria, as, for instance, an osteomyelitis with suppuration.

The annual meeting was held January 6, 1887, the President, A. JACOBI, M.D., in the chair.

Dr. JACOBI was re-elected President, and Dr. W. H. DRAPER was elected Vice-President.

THE ANTISEPTIC TREATMENT OF SUMMER DIARRHŒA.

Dr. L. E. HOLT read the scientific paper of the evening, and said that he would refer to the etiology and pathology of summer diarrhœa only as these might have a direct bearing upon the treatment. He would state at the outset that he did not ignore other methods of treatment than by drugs. The question concerned the best treatment for that vast number of cases which crowded our institutions summer after summer, for whom no change of fresh air was possible and only

limited and imperfect dietetic regulations were practicable.

One conclusion was forcing itself upon his mind,—namely, that, with the exception of the comparatively few cases of cholera infantum, nearly all cases of diarrhœa in children were dyspeptic in origin. Excessive heat during the summer and filthy surroundings causing fermentation and putrefactive changes in the food were factors which went to bring on dyspepsia; heat also impaired the power of digestion, by depressing nervous energy. It caused thirst by excessive perspiration, and led the child to take more food than the stomach could digest; heat also increased decomposition in streets and sewers, and in the filthy tenements the children breathed atmosphere charged with the germs of decomposition. But more than all else was the change it caused to take place in the food before it entered the stomach. Regarding a microbe as being the cause of summer diarrhœa there was lack of positive information.

The indications for treatment were grouped under four heads: 1, clear out the bowels; 2, stop decomposition; 3, restore healthy action in the intestine; 4, treat the consequential lesions.

The bowels should be as empty as possible in the first step of the treatment, and for the same reason that surgeons cleansed wounds before applying a dressing. Castor oil might be given to cause a movement of the bowels, and the large intestine might be washed out by a full injection of water,—one pint of water in a child under six months, and two pints in a child under two years. Let it be given slowly with a syringe, gently manipulating the abdomen. Many mild cases of summer diarrhœa could be cured by castor oil alone, provided proper diet was adopted; but in severe cases this resulted in temporary benefit only.

The third indication was met by antiseptics and attention to diet. Antiseptics should be administered in small doses frequently, and be easy to take. A nauseous mixture should never be given. His own experience had been in favor of salicylate of sodium. If there was much vomiting, no food whatever should be administered for ten to twenty-four hours. For thirst fresh water or barley-water might be given. If the child had been weaned it was better to withhold milk for a time altogether: peptonized milk was less likely to disagree than condensed milk or even fresh cow's milk, but even peptonized milk might bring on a relapse. A diet without milk might be given of such articles as wine-whey, chicken- and mutton-broth, the expressed juice from raw beef, etc.

The fourth indication was not easily met. It consisted mainly of follicular colitis. Astringents by the mouth were of little benefit. Of importance was careful attention to diet, also antiseptics which would check intestinal decomposition, and by thus stopping the source of the irritation remove the colitis. Then the whole large intestine should be washed out once a day with pure water of a temperature of 60° or 65° F. or with a weak antiseptic or astringent solution.

Regarding the indications for opium there was much controversy. Almost all drugs which had held their place in the treatment of summer diarrhœa during the past fifty years were now recognized as antiseptics, and he thought their value was not dependent upon their astringent influence, but upon their antiseptic properties.

Dr. Holt then gave an account of the introduction of creasote, oil of naphtha, salicin, salicylic acid, etc., in the treatment of diarrhœas. Yet it was wonderful to what extent chalk, opium, bismuth, etc., were still employed. The author spoke of the treatment adopted in summer diarrhœa at the different institutions in this city. About twenty-five thousand children were treated annually for diarrhœal diseases at these institutions. Bismuth was largely used in fourteen institutions; opium was an ingredient in nearly every compound prescription given; many physicians relied nearly altogether upon bismuth and opium; castor oil was used at six; castor oil and opium at three; chalk-mixture and vegetable astringents were largely used. Astringent injections, usually nitrate of silver, were used at three institutions. Other remedies were employed, such as ipecac, rhubarb, soda, etc.

In three hundred tabulated cases treated by the author some one of the following four methods was employed: 1, chalk-mixture, paregoric, and vegetable astringents; 2, the same, preceded by castor oil; 3, emulsion of castor oil with paregoric; 4, bismuth and Dover's powder, frequently but not always preceded by castor oil.

Of these three hundred cases one hundred and sixteen were cured, one hundred and seven improved, fifty-five unimproved, and twenty-two died. Had the children been returned and the treatment always carried out, he thought the cures would have risen to one hundred and fifty-one. Twenty-seven per cent. were improved, eighteen per cent. unimproved, and seven per cent. died. While these results were certainly not such as to be proud of, he ventured to say they were as good as those obtained by others by the same method of treatment. His own impression was that many drugs which were commonly regarded as of value would not stand the test of cold facts. The cases related received as good hygienic treatment as the surroundings would permit.

These unfavorable statistics had led Dr. Holt to try other methods of treatment. Of eighty-one cases treated by salicylate of sodium, allowing as before for failure to

carry out the treatment, the percentage of cases cured was eighty-four; improved, seven; unimproved, seven; deaths, about one. This was not an overestimate of the valuable results of treatment. Some of the most striking results occurred in cases of long standing. Out of six unimproved cases, three of the patients were brought to the dispensary only once; in another the mother probably failed to carry out the treatment. The single fatal case occurred in a very wasted child with the fourth attack that summer. The diarrhœa stopped after giving salicylate of sodium, but the vomiting continued, and it died two weeks later.

Forty-four cases were treated by naphthalin alone. Sixty-seven per cent. were cured, fifteen per cent. improved, and two per cent. died (one patient). In fifty-six per cent. of the cases the disease lasted four days or less; in thirty-six per cent., over a week.

Twenty-seven cases were treated by resorcin, but the results had not been as favorable as with salicylate of sodium or naphthalin.

Twenty-eight cases were treated by bichloride of mercury, fifty per cent. being cured, twenty-one per cent. improved, twenty-five per cent. unimproved, and three per cent. died. The cases treated by chloride of mercury were the only ones which were selected. The treatment was rarely preceded by a purgative, otherwise the results might have been better.

Salicylate of sodium was given in from one- to three-grain doses every two hours, according to the age, from three months to three years. In these doses the solution was tasteless, and could be given in food or drink. He had never seen it produce vomiting. Naphthalin, though possessing a disagreeable odor, was not disagreeable to the taste, and could be given for the ages mentioned in doses of one to five grains, and it might be taken with sugar of milk.

DISCUSSION.

Dr. WILCOX had employed naphthalin in thirty-two cases of diarrhœa, chiefly in adults, and he had come to feel as much confidence in its efficacy, under certain circumstances, as in mercury in the treatment of syphilis or quinine in the treatment of malarial affections. The most frequent cause of failure with naphthalin in the treatment of diarrhœa in adults was failure to administer it in sufficiently large doses. He gave sixty grains a day, and had gone as high as one hundred and twenty grains. He gave it in capsules with the oil of bergamot. Typical cases were related in which its use had resulted in cure of chronic diarrhœa of years' duration. He had also given it in two cases of typhoid fever, and thought that it acted as an antipyretic by disinfecting the intestinal tract.

Dr. ANDREW H. SMITH said it had often occurred to him that the best way of reaching cases of summer diarrhœa was to treat them antiseptically. He thought the success attending the use of many domestic remedies was due to their antiseptic qualities,—such remedies as the mints and essential oils. As far as his experience extended, it corresponded with that of the author.

Dr. JOHN C. PETERS said that some years ago he had spoken of summer diarrhœa as "a filth diarrhœa," and he thought the treatment of it on the basis of antisepsis was correct. The common mints were among the best antiseptics. The use of pure water would result in a cure in some cases, and it should be used in all.

Dr. R. VAN SANTVOORD had had considerable experience in the treatment of summer diarrhœas in inmates of the Randall's Island Hospital, and he thought the general conclusions of the author should be strongly emphasized,—viz., that a diarrhœa was primarily a result of indigestion, and that when a diarrhœa continued, and there existed inflammatory changes within the intestine, probably caused by putrefaction and fermentation, the indications were to render digestion what it should be by preventing such fermentative and putrefactive changes. With reference to the use of opium, he had been accustomed to employ it only when the diarrhœal passages were watery and frequent, and he employed it hypodermically, guarded by atropine. He regarded the effects of bismuth as antiseptic, and not mechanical; when he employed it he gave directions for taking it after each meal. He had recently employed free injections of some astringent solution to wash out the colon, and to remove the mucus which covered the membrane he combined with the injection some alkali; he had a general impression in favor of the method. Nothnagel's observations suggested the value of adding a little salt.

The PRESIDENT heartily agreed with what Dr. Holt had said regarding antiseptic treatment. Thirteen years ago he expressed in a paper the view that bismuth was an antifermentative. He thought it was impossible to relieve a severe attack of summer diarrhœa without stopping the ingestion of milk for a number of days. There were plenty of substitutes, and the one which he had used most was the raw white of egg mixed with some farinaceous substance, usually with barley-water. While raw beef was often beneficial, its use was attended with the danger of developing tape-worm.

Dr. G. L. PEABODY had during the last year come to look upon naphthalin as a very valuable addition to our remedies in the treatment of a variety of intestinal complaints. He was confident he had seen several cases of typhoid fever which had entered the hospital in the early stage of the disease apparently aborted by naphthalin. He gave sixty or eighty grains during the twenty-four

hours, in repeated doses. In a man who had diarrhœa for twenty-one years, with never fewer than seven movements a day, naphthalin was employed, and within ten days he was entirely cured. Other severe cases had been treated with this drug with marked results.

Dr. W. W. CARPENTER, as bearing on the antiseptic treatment of diarrhœas, said he had seen greater benefit from the regular use of old cider—a glassful three times a day—than from any other remedy, in patients who had contracted the diarrhœa when in the war of the rebellion. He had also seen chronic cases of diarrhœa—those dysenteric in character, and also some of the tubercular variety—greatly benefited or cured by salicin.

Dr. HOLT closed the discussion, and said that Dr. Caldwell had used the salicylate of sodium in the diarrhœa of phthisis, which resembled the diarrhœa of children, obtaining uniformly good results.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, DECEMBER 27, 1886.

The President, LAWRENCE JOHNSON, M.D., in the chair.

THE TREATMENT OF HERNIA BY SUBCUTANEOUS INJECTION.

DR. W. DE GARMO, the author of the paper, said that the year 1877 had marked an era in the treatment of hernia, owing to the publication of Heaton's method, which had been practised, but kept a secret, by Heaton since 1843. The object of methods of treatment prior to that time had been the destruction of the hernial sac, but Heaton made no attempt to do this. The object in injecting his fluid was not to produce inflammation; it was to fortify the fibrous tissue surrounding the canal so that protrusion would not recur.

Dr. De Garmo had operated by Heaton's method during the past seven years in over one hundred cases, furnishing abundant evidence of its value and its freedom from danger. The failures with it in the hands of some he attributed to the erroneous method of operating and the want of proper after-treatment. For instance: in invaginating the scrotum with the finger introduced into the canal, unless proper precaution was taken, the fluid would be injected into the base of the scrotum; the fluid was not brought in contact with the proper tissues; it was sometimes allowed to return in the track of the needle. Some surgeons had allowed their patients to go without a support from the moment of rising from the bed at the end of a week or ten days, and some had even asked them to cough or strain, in order to test the effects of the operation. It was needless to say that the hernia would return in all such cases. The after-management is as important as the manner of operating. The patient, after being confined to bed for seven or ten days, or even fourteen days in severe cases, should, on rising, wear a truss. But too firm pressure should not be made, as it tended to weaken the tissues which it was desired to strengthen. In March last he called attention to a modification of Heaton's method for patients who were unable to remain abed after the injection. It consisted in repeated injections of a small amount of the fluid, the patient wearing a truss and continuing at his business. The operation, in his experience, had resulted in cure in forty-five per cent., and the percentage of cures would reach fifty or seventy-five per cent. in selected cases. Benefit always resulted, even in the worst cases, the patient being enabled to retain the hernia by the aid of a truss, which he had before been unable to do. Children who had not been cured by an instrument could always be cured by Heaton's method. Dr. De Garmo was not disposed to change from Heaton's fluid, which consisted of fourteen grains of the solid extract of white-oak bark to the ounce of the fluid extract, rubbed up together.

Dr. R. F. WEIR had done Heaton's operation in about seventy or eighty cases, and his cures had been nearer one-third than one-half.

A CLINICAL STUDY OF NEURALGIAS IN NEW YORK.

Dr. DANA made two subdivisions of his paper: 1. Had the neuralgias of New York the same physiognomy as those of Europe? 2. The reflex origin of neuralgias and neuralgic pains.

True idiopathic neuralgia was a rare disease, not constituting over two or three per cent. of all cases of nervous disorders. Sympathetic neuralgia was frequent. The neuralgias in New York which formed the basis of his studies occurred in 250 of his own patients and in 252 seen by other physicians in private or dispensary practice: trigeminal neuralgia constituting 43 per cent.; sciatic, 23 per cent.; intercostal, 13; cervico-occipital, 4.5; lumbo-abdominal, 2.5; articular, 2 per cent. One-third of all the cases occurred before the twenty-fifth year, and two-thirds before the thirty-fifth year; the ratio of males to females was 3 to 5; the greatest number of cases occurred in the winter, the fewest in spring. The greater proportion of neuralgias in this country occurring in early life he regarded as showing a less number of the degenerative and violent types.

As to neuralgia of special nerves, the branches of the fifth pair were affected the most frequently: out of a hundred cases, the supra-orbital was affected in thirty-three per

cent; there was migraine in thirty-one per cent., mixed forms in seventeen per cent., infra-maxillary in five per cent., tic-douloureux in five per cent., and infra-orbital in three per cent. Of these cases, about two out of three were females. There was an increase of trigeminal neuralgias between the thirty-fifth and forty-fifth years. In all neuralgias, the left side was affected in about three out of five cases. Most cases of migraine and supra-orbital neuralgia were worse in the morning, especially those curable by quinine and arsenic. As to causes, child-bearing, anæmia, and exposure were common. The nervous temperament was often present. The cases of migraine in which the face was flushed red were rare. In nearly all cases it was a family disease, alternating at times with other neuroses. Almost all responded well to treatment. He had not been able to convince himself of any connection between the cases and nasal or pharyngeal irritation. One case showed a relation to trouble with the eye. He did not regard migraine as due to an affection of the vaso-motor system: it belonged to trigeminal neuralgias.

Much had been said about the reflex origin of intercostal neuralgias, but in his experience only a small proportion of the cases were of reflex origin. Probably one-half the pains in the left side were myalgic. Neuralgic, myalgic, and neuro-myalgic varieties should be recognized in the treatment.

Reflex influence in the production of neuralgias had probably become exaggerated in the minds of physicians, but they were of sufficient importance to deserve further study. According to numerous reports of cases, almost any surgical operation about the head would cure ninety per cent. of migrainous patients. He thought we might speak of a pseudo angina pectoris of gastric origin. The stomach and intestines were the most frequent causes of reflex pains; second, he thought, was the uterus.

In his conclusions, he said that reflex pains were pains reflected from a lower to a higher level; they occurred, as a rule, when the irritation was severe over the part where the irritation existed. Reflex pains originating in one cerebro-spinal nerve were referred to other cerebro-spinal nerves, and those originating in visceral nerves were reflected to the cerebro-spinal nerves,—rarely the reverse. Reflex pains were unilateral when the cause was unilateral, and were felt on the same side. There were occasional exceptions to this rule. Remote reflex pains were only produced when the irritation was slight. Diffuse irradiation of the pains meant an impaired state of the nervous system. Reflex pains of visceral origin were carried by the cerebro-spinal nerves to the cord, and thence to the brain, and not by way of the pneumogastric. He did not believe the pneumogastric to be a sensitive nerve of the viscera.

The paper was discussed by Dr. W. O. MOORE and Dr. PUTNAM JACOBI, and the discussion was closed by the author.

PHILADELPHIA NEUROLOGICAL SOCIETY.

A STATED meeting was held December 27, 1886, the President, DR. S. WEIR MITCHELL, in the chair.

Dr. GUY HINSDALE read a paper entitled

FACIAL SPASM AND TIC DOULOUREUX FOR WHICH NEURECTOMY AND NEURO-TENSION WERE EMPLOYED (see page 278).

DISCUSSION.

The President, Dr. S. WEIR MITCHELL: I have several points to make with reference to these cases. The woman operated on by Dr. Keen I have seen within the past few days, and she presents no paresis of the face at all. As yet the case is a perfect success. She is entirely free from any twitching. Her case recalled others, and in looking over my note-books I found that within the past twelve years I had seen fifteen cases of painless tic, in none of which was the slightest relief afforded by any method of treatment. It so happened that shortly after Dr. Sinkler's case was treated so successfully, Mrs. G., aged 49, the widow of a physician, a very intelligent woman, consulted me. She stated that her tic had begun about three years ago. It first appeared under the eye, where it nearly always begins, although I may say that as yet the history of these cases is not complete. Then the twitching appeared in the cheek, which, as a rule, has been the point next attacked in my cases. The spasm afterwards extended to the mouth. In those cases in which it became general it extended beyond that, and in the last case that I have seen the levator muscles of the ear were involved, so that the ear was drawn upward every time that the face twitched. But extension to the neck or more distant parts is seen at times in rare cases.

In Mrs. G. the spasm was very violent, and she described it by saying that "the whole side of the face migrated under the left ear and stayed there awhile." The length and endurance of the spasm were remarkable. She had from ten to fourteen attacks every minute. They were pretty regular. At certain times she was comparatively free, but scarcely five minutes passed without twitching.

I observed in this case, as in some others, a certain amount of appearance of paresis on the affected side of the face,—that is to say, the muscles on the sound side of the face appeared to predominate. I have so far been unable to observe any difference in the electrical reactions of the affected muscles. Perhaps more careful observation will show some change. It has been suggested to me that this paresis was the result of fatigue; but, as we

know, in most spasms the muscles become larger and stronger and do not present evidences of fatigue.

In this case I began to think whether there was not something which had not been done which might give relief. The idea of weakening the facial nerve or its branches by freezing suggested itself. If I had reflected a little I should have recognized the fact that it is impossible to affect the deeper nerves in this way. Freezing by vapor-jets applied to the surface acts very little beneath the skin. I have tried this by putting the finger in the mouth and trying to freeze through the cheek by means of the rhigolene spray. I have never succeeded in producing more than a slight chilling. In this case I have on sixteen occasions frozen with the rhigolene-jet a large portion of the skin of the cheek, sometimes covering the whole of the side of the face, taking care to protect the eyes and to prevent the inhalation of the vapor.

The result has been an interesting and a curious one. The very first freezing, like all the subsequent ones, brought on instantaneous spasm. The moment the jet struck the face there was violent twitching. When freezing was effected the spasms ceased and did not return for many hours. This result surprised me very much, and it appeared that while I was attempting to accomplish the result in one way I had done it in another.

Under these daily freezings this case has gained so far as to pass days without more than such rare twitches beneath the eye as excite no attention. Enough has been won to satisfy her if the gain should last, as to which I will report.

I observed that a vigorous freeze over the points of nerve-exit was better than a general freeze. I am about to try if localized freezing by ice and salt or other means which act more deeply may not answer. The influence *seems* to be exerted through the sensory nerves, from which possibly arise also the impressions which create these spasms. With my remembrance of former cases, I cannot say that I feel hopeful as to the remote future of the present one.

I have tried the same plan of treatment in a second case of nine years' standing. She came to me some years ago, but, as I knew of nothing that would afford relief, I refused to treat her. I sent for her ten days ago, and began the use of the rhigolene spray. She too has slight paresis. The face is apparently pulled to the right, the spasm being on the left side, which is the side commonly affected. The results obtained with the individual freezings are practically the same as in the first case. The touch of the spray brings on the spasm. When the part is frozen the spasms remain absent for a considerable length of time, although not so long as in the first case. The period varies from half an hour to two hours. Under this plan of treatment the attacks have diminished in frequency and in intensity.

This is as far as I have gone, but I thought it well to bring this matter before you, for some of you may have one of these rare cases under observation and may desire to try the same experiment. As we know of no method of treating these cases except by operation, I consider it perfectly proper to try the effect of rhigolene. After the spray has been used for some days, care must be exercised that a slough is not produced. I have never had a slough, although I have made the skin very sore. This has led me to think that possibly the good result was due to counter-irritation, and I shall not be satisfied until I have tried extensive counter-irritation over the origin of the facial nerve in some suitable case.

Dr. J. MADISON TAYLOR: I have had under my care a case in which a severe spasm of the right side of the face had been present for twenty years. The woman was nervous, and came of a family many members of which were in a general way nervous, yet quite strong and robust. The spasm, although very annoying, was not sufficiently marked to call for special treatment. About fourteen months ago the youngest daughter of this woman passed through a severe attack of typhoid fever. The mother, from nursing the child, became very much exhausted. Then the spasm grew worse, and was at times sufficient to shake the head. When the child became convalescent the mother was taken with the disease and had a severe attack, with high fever and delirium for six days. Upon her recovery from the typhoid fever the spasm had entirely disappeared, and to the present time, a period of ten or twelve months, there has been no return. It is interesting to note the curative effect of a severe illness on this intractable disorder. Hers was a veritable purgation with fire.

(To be continued.)

REVIEWS AND BOOK NOTICES.

HOW WE TREAT WOUNDS TO-DAY. A TREATISE ON THE SUBJECT OF ANTISEPTIC SURGERY WHICH CAN BE UNDERSTOOD BY BEGINNERS. By ROBERT T. MORRIS, M.D. New York and London, G. P. Putnam's Sons, 1886.

The subject of the antiseptic system of dressing wounds (without the spray) is presented in this work in a terse, familiar, and dogmatic style, which may convince some surgeons who have not yet had it presented as directly to their attention as it is here, but it is probable that many will be repelled by the style of the writer. One could be excused, however, for feeling and expressing himself strongly who daily sees operations performed, with

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Med. prop.—Tonic, Astringent.

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Med. prop.—Narcotic, Sedative.

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safety to the patient, which under the former methods were attended with prolonged suppuration, and in spite of the utmost care frequently terminated fatally,—operations, indeed, which under other circumstances would be properly regarded as unjustifiable. Besides the technique of antiseptic treatment, its application to various kinds of wounds—lacerated, gunshot, or poisoned—and burns is specifically discussed.

SIXTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF NEW YORK. Transmitted to the Legislature March 19, 1886. Albany, New York, 1886.

In the Secretary's report a number of interesting topics are considered. The relations of pulmonary consumption and cerebro-spinal fever to faulty drainage and high ground water; the prevalence of filth diseases, the history of the last year's smallpox epidemic upon our borders demonstrating again the protective value of vaccination, and the futility of relying upon quarantine alone to exclude contagious disease; an outbreak of typhus fever; a discussion of the fallacies of the chemical analyses of water, and the importance of a biological test, are the principal topics considered in the Secretary's able report. Reports from the Sanitary Committee, of inspection of localities and upon the sewerage of Binghamton, accompanied with maps, are given, and a report of the State Analyst of Drugs is appended, with special reports on quinine pills and on beer. The report of the Standing Committee on Registration and Vital Statistics and appended documents also contains much interesting and valuable materials, gathered from actual inspection.

AN EPHEMERIS OF MATERIA MEDICA, PHARMACY, THERAPEUTICS, AND COLLATERAL INFORMATION. January, 1887.

The first number of Volume III. of Squibb's Ephemeris contains valuable articles upon hydrochlorate of cocaine, opium, and aconite, in addition to interesting notes on medicine and pharmacy abroad, the relations of physicians to their medical supplies, and the alcohol question before Congress. The Ephemeris will continue to be published at intervals, according to the accumulation of materials.

COCA ERYTHROXYLON (VIN MARIANI). ITS USES IN THE TREATMENT OF DISEASE. With Notes and Comments by Prominent Physicians. Third Edition, Paris and New York.

This little work gives a satisfactory *résumé* of what is known of coca, and especially of its application to the treatment of disease in the form of Mariani's wine. Among the names of those furnishing testimonials as to the benefit derived from the coca-wine are those of many prominent artists and physicians. A copy of this monograph will be sent free by the publishers to any address. Mariani & Co., 127 Fifth Avenue, New York.

THE *Archives of Gynæcology, Obstetrics, and Pædiatrics*, New York, series of 1886, just completed, has met with such warm encouragement that the publishers have decided to issue them monthly, instead of bi-monthly, as heretofore, commencing with January.

NEW REMEDIES AND CLINICAL NOTES.

AN EXPERIMENTAL STUDY OF MYCOTIC OR MALIGNANT ULCERATIVE ENDOCARDITIS.—Malignant ulcerative endocarditis is a form of lesion always associated with some kind of bacteria. The causative relations of these bacteria to the lesions are points upon which Dr. T. Mitchell Prudden seeks to throw some light in a recent paper.

Dr. Prudden shows that bacteria are frequent in a certain proportion of cases of acute ulcerative endocarditis in the cardiac and, when these exist, in the peripheral lesions. These bacteria are small and of spheroidal form in almost all the cases thus far described; but in a few cases the presence of bacilli has been noted. There are cases of ulcerative endocarditis with extensive destruction of tissue and large formation of thrombi, in which the lesions are entirely free from bacteria. In these cases, as a rule, the endocardium is the seat of an old inflammatory process, and the peripheral embolisms, infarctions, etc., do not contain bacteria. In many cases of acute ulcerative endocarditis associated with bacteria, the valves and endocardium are also the seat of old inflammation.

The destructive process and formation of thrombi in the heart-valve and endocardium may be as marked and extensive in the cases in which the bacteria are absent as in those in which they are present; but in the latter class of cases the embolic lesions which are apt to be developed are of an infectious nature, and the general course of the disease is apt to bear the stamp of an acute infectious disorder.

The gross appearance of the valvular lesion does not always or usually enable us to distinguish between these two forms of disease. Bacteria are sometimes present in cases of acute vegetative endocarditis, but in the lesions of chronic proliferative endocarditis they do not appear to occur at all. The bacteria which are present in the cardiac and peripheral lesions in cases of malignant ulcerative endocarditis are the causative factors in the disease. The bacteria apparently produce the cardiac lesions by lodgement on the surface of the valves and endocardium, when the latter are rendered vulnerable to their action either by

mechanical or chemical injury, or by the presence of old inflammatory alterations, or by conditions unknown to us. Bacterial embolism of blood-vessels of the heart-valves is apparently not of frequent occurrence, as was formerly believed.

The only bacteria which have been thus far absolutely identified as occurring in the lesions of malignant ulcerative endocarditis in man are Streptococcus pyogenes and Staphylococcus pyogenes aureus. This identification has been made in six cases. Dr. Prudden has demonstrated that other species of bacteria than those mentioned are capable of causing similar lesions in rabbits under similar experimental conditions.

Finally, Dr. Prudden points out that, in view of the significant relationship of the bacteria of pyæmia and suppuration to malignant ulcerative endocarditis in the cases thus far fully examined, it is evident that a demonstrably diseased condition of the heart-valves, or a previous history which would suggest the possibility of such a condition, should be an additional incentive to the practice of a vigilant antisepsis in operations, however simple, upon this class of cases.—*American Journal of the Medical Sciences.*

On Some Forms of Albuminuria not Dangerous to Life.—The gravity of albuminuria as a symptom has been differently estimated at different times, but gradually it has come, in recent years, to be known that albumen often appears in the urine, even in considerable quantity and very persistently, in persons free from important organic malady. Indeed, it may be maintained that some patients with persistent albuminuria are yet eligible for life-insurance at little, if at all, above ordinary rates.

It is, therefore, important to know the characteristic features of these non-dangerous albuminurias and in general the pathological import of this symptom in a given case.

Dr. Grainger Stewart, in the same journal, studies the following varieties: 1, paroxysmal albuminuria; 2, dietetic albuminuria; 3, albuminuria from muscular exertion; and, 4, simple persistent albuminuria; and illustrates each with reports of cases which are markedly characteristic.

The diagnostic features of paroxysmal albuminuria are the sudden and copious occurrence of albumen in the urine with numerous casts, the process lasting only a short time and recurring at intervals with or without a perceptible exciting cause. The exciting cause, according to Dr. Stewart, is irritation of the kidneys from blood-changes. The treatment should be directed, on the one hand, to the avoidance or diminution of renal irritation, and, on the other, to the regulation of the hepatic function and of the chemical processes in the body. Happily, the attacks are usually of brief duration, and he has never known them prove permanently injurious.

Dietetic albuminuria is a variety which has long been more or less distinctly recognized. Some people suffer from it whenever they indulge in certain articles of diet. In some cases one kind of food, in others many require to be proscribed: cheese, pastry, and eggs are among the more common offenders. Of this group our present knowledge does not suffice to afford a satisfactory explanation.

The cases of albuminuria following upon muscular exertion Dr. Stewart is disposed to attribute to a general change in vascular activity. The principal indications for their treatment are met by rest, judicious diet, and attention to the general health. Those remedies which act upon the muscular fibres of the vessels deserve trial.

The features of simple persistent albuminuria are the constant presence of albumen, usually in small quantity, unattended by tube-casts, diminution of urea, increased muscular tension, cardiac hypertrophy, or other consequence of renal malady, persisting for a period of months or years, and little influenced by diet or exercise.

Dr. Stewart concludes his study with a consideration of the prognosis of these groups, placing special dependence upon the quantity of the urea, the presence or absence of tube-casts, and the condition of the pulse and heart. This will indicate whether simple albuminuria or organic disease is present, and if they are favorable a hopeful prognosis may be given.

Actinomycosis Hominis.—Actinomycosis is a progressive inflammatory affection set up by a certain fungus, the actinomyces, resulting in the formation of granulations and fibrous tissue and in suppuration; attacking human beings, cattle, and swine, and communicable to cattle by inoculation. The fungus occurs as small globular masses, commonly about the size of a millet-seed, usually of a pale-yellow color, but at times white, brown, green, or speckled, with a surface closely covered with palisade-like rows of clubbed bodies which give it a mulberry-like appearance. If seated in the tissues, each portion of fungus is surrounded by inflammatory products forming a nodule which in its structure may exactly resemble a tubercular granulation. In the *American Journal of the Medical Sciences*, Dr. E. Markham Skerritt gives a *résumé* of our knowledge of the disease, and reports a case in which one lung had been previously attacked, and which presented certain features of special interest.

The etiology of the disease is still obscure. The micro-organism has never been recognized outside the body, and, apart from inoculation experiments, no direct relationship between the disease as occurring in the lower animals and as met with in man has been

established. There is strong evidence to associate the occurrence of the disease with the existence of carious teeth or dental fistulæ. The fungus may enter the body, however, by the mouth, pharynx, respiratory passages, or digestive tract. Wherever the primary seat may be, in any case of actinomycosis, generalization of the fungus by embolism may occur, with resulting recurring rigors and hectic and secondary foci of infection.

PROLONGED GESTATION.—Dr. J. Cheston Morris reported to the Academy of Medicine the following case, which occurred in his practice in 1857. He found the patient, contrary to her belief, three months pregnant in May; she quickened about June 20, and presented no unusual symptoms until the 20th of August, when she fell down a flight of stairs, and soon after lost a large quantity of blood, which she insisted was liquid only. The motion of the child ceased from three to four weeks, when they recommenced, feebly at first and afterwards stronger, which continued until delivery, April 18, 1858, there being nothing abnormal about the child. After careful study, he was forced to believe that the woman carried the child for fourteen months. This led to an investigation of the duration of pregnancy, which is usually held to last during ten lunar months. In order to have a help in this research, he made use of a study of gestation in the lower animals. For twenty years he kept a record of a flock of sheep on his farm. This period has been usually assumed to be one hundred and forty-seven to one hundred and fifty days. But in fact he had reported one hundred and twenty-six pregnancies with an average of one hundred and sixty-four and a half days' duration. In 1878 the flock appeared to be suffering from an epidemic of scarlatina, and the duration of gestation varied between the extremes of one hundred and forty-six and one hundred and ninety-nine days.

Whenever practicable, he had collected histories of human pregnancies which could be assigned to a certain fixed time, and out of a list of twenty-five selected with care, the limit varied between the limits of two hundred and fifty to two hundred and ninety-one days.

ADDISON'S DISEASE IN A NEW-BORN INFANT.—Dr. E. Belaiëff, of Voronej, details in the *Meditzenskoie Obozrenie*, No. 1, 1886, page 54, a unique case of Addison's disease in a new-born male infant. No case occurring in a child younger than three years of age has ever been recorded. The child had been deserted, and was found lying on the pavement. It appeared to be about seven days old. The integuments were slightly yellowish, with a gray tint. Later on, the yellowish discoloration disappeared, while the skin gradually assumed a dirty-gray color, which was most intense on the back and belly, especially around the navel. Notwithstanding a good appetite, the infant steadily became prostrated and emaciated, and fifty-three days after admission died in an unconscious state during a paroxysm of tonic and clonic convulsions. There was no fever from the beginning to the end. At the necropsy both supra-renal capsules were found considerably enlarged (one by three-fourths inch), their upper two-thirds being transformed into an aggregate of thin-walled, semi-translucent cysts, the size of which varied from that of a pin's head to a small cherry. The cysts contained clear serous fluid.—*British Medical Journal.*

INGLUVIN.—An infusion made with the inner membrane of the gizzard of the chicken is said to be a domestic remedy in long use in some portions of this country for the relief of weak digestion, and it has been used in a similar way for many years in China. The powdered dried membrane was highly recommended for such condition by the late Professor Ellerslie Wallace, of the Jefferson Medical College. Ingluvin has been made by Mr. W. F. Warner, in order to meet the demand created for it very largely by Dr. Wallace's praise of it, especially in the vomiting of pregnancy. It is a yellowish-gray powder, and is given, like pepsin, in three- to ten-grain doses in the disordered stomach during gestation, cholera infantum, diarrhœa, and flatulence with indigestion. As it has no irritant effect, it can be given in inflammatory conditions of the mucous membrane. Bartholow recommends it for the relief of vomiting, especially during pregnancy.

FOR DIARRHŒA IN CHILDREN.—

℞ Ferri sulphatis,
Sodii salicylatis, āā gr. xx;
Glycerini, f℥iij;
Aquæ q. s. ad f℥iij.

Dissolve soda and the iron salts separately, and mix the solutions. One teaspoonful should be given every hour until the stools are blackened (in about twenty-four hours); afterwards every three hours. Occasionally a small dose of castor oil is given, in order to clear the bowels and get the secondary constipating effects of the oil.—BRAITHWAITE: *British Medical Journal.*

MISCELLANY.

FIRE-PROOFING WOOD.—A mode of rendering wood incombustible not generally known is described as follows: Soak 27.5 parts by weight of sulphate of zinc, 11 of potash, 22 of alum, and 11 of manganic oxide in lukewarm water in an iron boiler, and gradually add 11 parts by weight of sixty-percent. sulphuric acid. The wood to be prepared is placed upon an iron grating in an apparatus of suitable size, the separate pieces being placed at least an inch apart. The liquid is then poured into the apparatus and

the wood allowed to remain completely covered for three hours, and is then air-dried. The mode of application described is, we fear, a serious obstacle to the general use of this process for timber employed in building, especially as the rough timber, before being worked or framed, could only be conveniently treated in this manner. If joists, ceiling-beams, and all joinery exposed to fire could be treated after being fixed with some chemical solution of proved resistance to the action of flame, we believe many architects would be found to employ it.—*Druggists Circular.*

INTERNATIONAL MEDICAL CONGRESS, VACANCIES FILLED.—Dr. J. J. Chisolm, of Baltimore, Maryland, has been appointed President of the Section of Ophthalmology, in place of Dr. E. Williams, who was compelled to resign on account of ill health. Judson B. Andrews, M.D., Superintendent of the Hospital for the Insane at Buffalo, New York, has been appointed to the place made vacant by the death of Dr. John P. Gray, as President of the Section of Psychological Medicine and Nervous Diseases. No vacancies now remain in the list of the chief officers of the preliminary organization of the Congress or its Sections, and our information from all departments is of the most encouraging character.—*Journal of the American Medical Association.*

ON the 29th of December the course of the Training School for Nurses at the University of Pennsylvania was formally opened. The first lecture was on "Treatment of Fevers." It was delivered by Professor William Pepper.

INSTRUCTION IN MASSAGE.—Dr. Benjamin Lee, No. 1532 Pine Street, has begun a course of lessons in massage and the simpler Swedish movements. Classes are limited to six.

ANTIFEBRINE (acetanilide) has been used quite extensively by M. Dujardin-Beaumetz in the treatment of epilepsy. It is believed to be one of the most powerful "moderators" of the special centres that we possess.—*Lancet.*

MR. LAWSON TAIT has had conferred upon him by the University of the City of New York the honorary degree of M.D.

NOTES AND QUERIES.

EXTRACT OF MALT AS A THERAPEUTIC AGENT IN TABES AND TUBERCULOSIS.

HAVING had marked success in the use of Johann Hoff's Malt (Eisner's), I deem it proper to report a few cases.

Case I.—On the 25th of November, 1886, I was called to see P. R., æt. 5 months. Father has tuberculosis, mother strong and healthy, nursing the child at the breast. Hygienic surroundings bad, house damp. The child has had a cough almost since birth, which has been growing worse; he has been losing flesh; marked emaciation; vomits occasionally through the day. Bowels regular, containing at times muco-purulent matter, most likely from the lungs. Pulse weak and rapid, tongue coated, child peevish. Physical signs: large and small râles in various parts of both lungs; prolonged expiration; percussion-dulness at various points. The child was placed upon half-teaspoonful doses of Johann Hoff's Malt four times a day. I wish to call particular attention to the fact that this extract should be administered warm in cases of lung-disease.

December 9, 1886. The child is much better, the cough slight, appetite improved, vomiting ceased. The stools contain very little muco-pus. Respiratory sounds approaching the normal; the dulness is clearing. Ordered teaspoonful doses of the Extract four times a day.

January 6, 1887. The child has been well for more than a week. He is well nourished, pulse strong, stool normal. The cough has disappeared, lung-sounds normal. Child discharged cured. Diagnosis, tabes.

Case II.—H. B., æt. 6. Had nasal diphtheria on October 28, 1886; was fully recovered on November 17. About December 6 the mother noticed an impediment in the child's speech and sent for me. The patient was markedly anæmic, spoke with a nasal twang, and severe attacks of coughing followed the act of swallowing liquids. Diagnosis, diphtheritic paralysis of the pharynx. Treatment: strychninæ sulph., gr. $\frac{1}{75}$, quininæ sulph. and ferri sulph., āā gr. ss, in pill three times a day.

December 12. Child slightly improved. Stopped the pills and ordered teaspoonful doses of Johann Hoff's Malt four times a day.

January 4. The child has made a complete recovery.

Case III.—I was called to attend Mrs. M. W., æt. 42, on December 13, 1886. Her family history is good. Was perfectly well up to four months ago. Her husband died a year ago of phthisis. Physical examination revealed the early stages of tuberculosis, affecting the left lung. Debility has been so marked that she has not been able to get out of bed for the last five weeks. The cough is very troublesome, pulse weak. Ordered a wineglassful of the Johann Hoff's Malt four times a day.

December 24, 1886. The patient states that before she had emptied the first bottle she was able to walk across the room. At this date she is down-stairs; is much stronger; pulse improved; cough not so troublesome; chest-sounds markedly improved.

January 6, 1887. Patient has gained very much in strength, and is able to attend to her household duties. The future progress of this case will be reported.

J. B. POTSDAMER, M.D.
1629 NORTH EIGHTH STREET, PHILADELPHIA,
January 6, 1887.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 2, 1887, TO JANUARY 15, 1887.

LIEUTENANT-COLONEL JOSEPH C. BAILY, ASSISTANT MEDICAL PURVEYOR.—Ordered from Department of the East to New York City, to take charge of the medical purveying depot in that city, relieving Captain Henry Johnson, Medical Storekeeper, from duty as acting assistant medical purveyor. S. O. 9, A. G. O., January 12, 1887.

MAJOR HARVEY E. BROWN, SURGEON.—Granted leave of absence for six months, on surgeon's certificate of disability, with permission to leave the Division of the Missouri. S. O. 9, A. G. O., January 12, 1887.

CAPTAIN J. K. CORSON, ASSISTANT-SURGEON.—Ordered to Fort Cœur d'Alene, Idaho Territory.

CAPTAIN C. E. MUNN, ASSISTANT-SURGEON.—Ordered to Fort Canby, Washington Territory.

FIRST-LIEUTENANT J. M. BANISTER, ASSISTANT-SURGEON.—Ordered to Fort Cœur d'Alene, Idaho Territory. S. O. 227, Department of the Columbia, December 31, 1886.

CAPTAIN RICHARDS BARNETT, ASSISTANT-SURGEON.—Leave of absence further extended six months, on account of sickness. S. O. 9, A. G. O., January 12, 1887.

FIRST-LIEUTENANT GEORGE F. WILSON, ASSISTANT-SURGEON.—Leave of absence extended twenty days. S. O. 9, A. G. O., January 12, 1887.

FIRST-LIEUTENANT H. I. RAYMOND, ASSISTANT-SURGEON.—Ordered for duty at Presidio of San Francisco, California. S. O. 127, Department of California, December 29, 1886.

FIRST-LIEUTENANT F. J. IVES, ASSISTANT-SURGEON.—Granted one month's leave of absence, with permission to apply for twenty-three days' extension. S. O. 1, Department of the Platte, January 3, 1887.